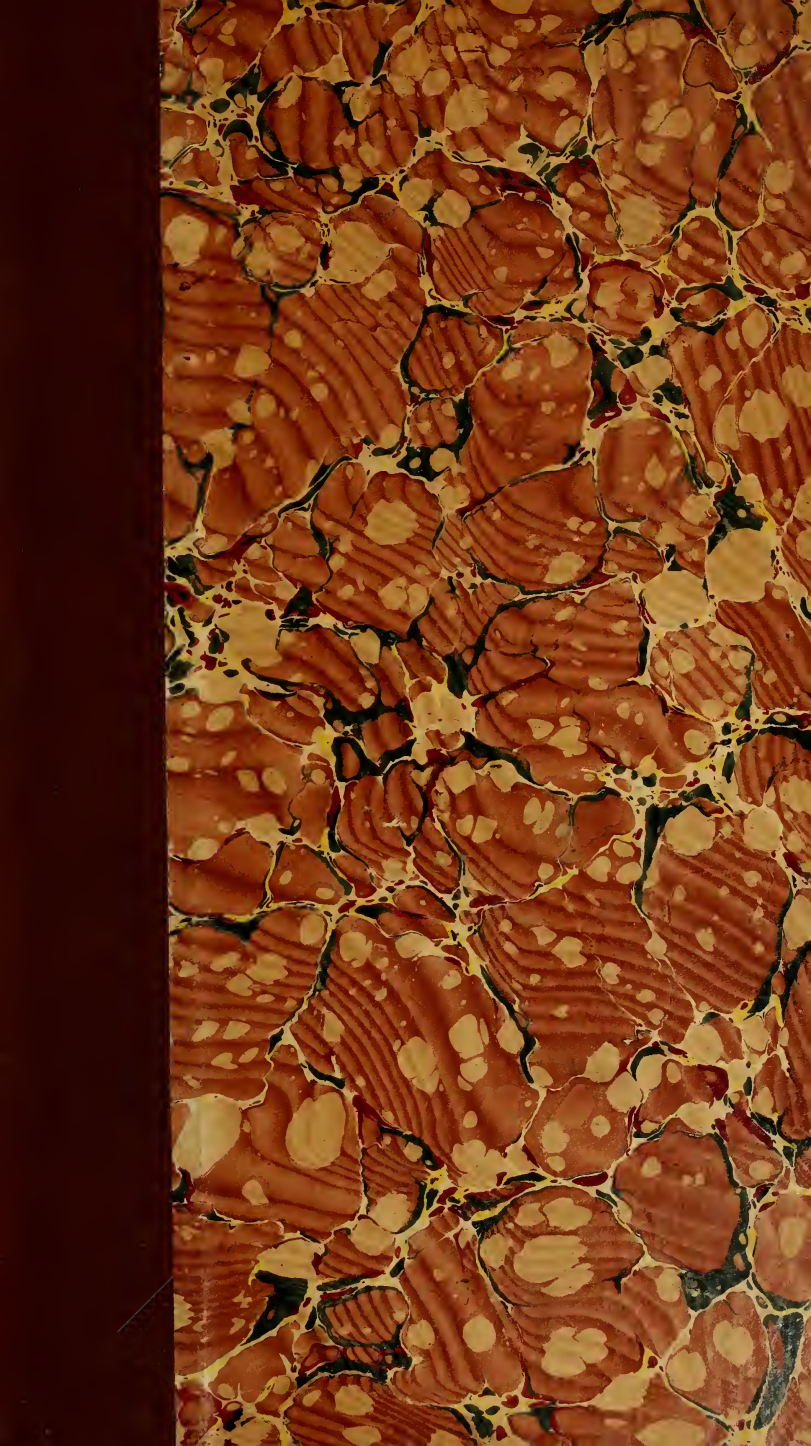




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Charlotte Medical Journal.

A SOUTHERN JOURNAL OF MEDICINE AND SURGERY.

VOLUME 59.
NUMBER 1.

Charlotte, N. C., January, 1909.

\$2.50
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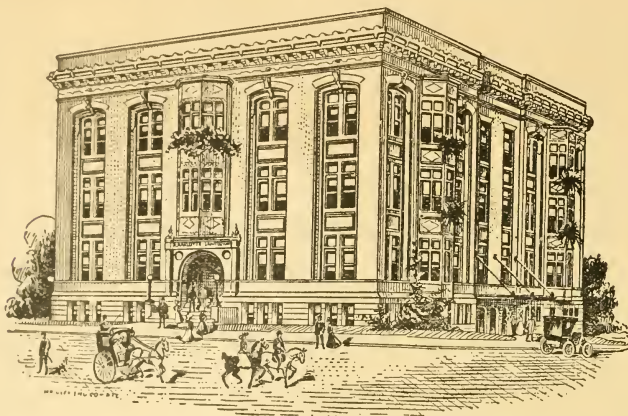
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VOL. LIX

CHARLOTTE, N. C., JANUARY, 1909.

No. 1

Intestinal Auto-Intoxication.*

By Arch Dixon, M. D., Henderson, Kentucky.

To Bouchard perhaps, more than to another belongs priority in the investigation of results produced by absorption of substances from normal or abnormal cavities of the body developed from putrefaction or fermentation. Putrefactive processes in the intestinal canal and the development of physiological and pathological alkaloids play an important part in many disease processes until lately unknown or misunderstood. Death frequently carries off in a few hours or days persons who are in the prime of life and in apparent good health, and at the autopsy the most careful examination fails to reveal alterations of structure such as can explain the fatal stroke. Epidemics not of a specific character, but traceable to poisons in food or water, have unexpectedly appeared in certain neighborhoods. Scarcely a day passes that we do not find in the public press accounts of violent and sudden illness due to ingestion of impure foods, both solid and liquid.

Doubtless many of you here present can recall how the members of a marriage party, some years ago in the city of Louisville, were made desperately ill, two or three of the party dying from eating chicken wherein putrefactive germs had been implanted. Fish and oysters, not quite fresh, are especially noted as carriers of these microbes of putrefaction and fermentation, the products of which cause illness and death. These are the cases which have aroused public opinion and awakened professional interest in a subject, toward the elucidation of which the pathological chemist has vied with the bacteriologist.

(1) Bouchard in his lectures on "Auto-Intoxication" clearly indicates that man is constantly standing as it were on the brink of a precipice; he is continually on the threshold of disease. Every moment of his life he runs the risk of being overpowered by poisons generated in his own system. Self-poisoning is only prevented by the activity of such excretory organs as the kidneys, skin and lungs, and by the watchfulness of the liver, which acts the part of a sentinel to the materials brought to it by the portal vein from the alimentary canal.

(2) Lauder Brunton devotes considerable space to the discussion of this important subject in his "Introduction to Modern Therapeutics." He calls attention to the

fact that chemical investigation has shown how disease depends upon the products of putrefaction and fermentation, rather than upon the direct action of microbes upon the tissues. It is this fact which renders knowledge of the life history of bacteria so valuable, for long after microbes have been destroyed, the enzymes, or ferments which they formed, continue to act, and are not destroyed by a temperature which is destructive to the organisms themselves. It has been demonstrated beyond question that true intoxication may result from eating tainted meat. Gaspard and Panum have shown that the putrefaction of meat develops a poison capable of inducing accidents both serious and fatal. There is a marked difference, however, in the development of symptoms from the ingestion of meat, fish, etc., in which the processes of decomposition have progressed to such an extent that the *products* of putrefactive microbes are present and the ingestion of meat, etc., which is only beginning to putrefy, in which microbes are at work inducing fermentation but in which the products of these microbes have not as yet been formed.

In the first case the symptoms are developed rapidly, usually beginning in a half hour after eating tainted meat. In the other case there is a period of incubation in which the symptoms are slowly developed, lasting from eight to eighteen hours after the ingestion of suspected foods. In this period of incubation no warning of the explosion which is preparing is given; but once the poison is formed, toxic accidents are quickly developed, and we have the symptom complex of ptomaine poisoning.

Intestinal auto-intoxication, as we now understand it, may be succinctly summarized as follows:

"During digestion, a number of poisons or entero-toxins are manufactured as a result of putrefaction of albuminoid food in the intestines. These entero-toxins attain the liver by the way of the entero-hepatic circulation where they are made innocuous. From the liver they pass into the general circulation and are excreted in the urine. If albuminoid putrefaction is excessive, or, if the liver or kidneys prove inadequate in either neutralizing or excreting the poisons, intoxication of the organism ensues."

(3) "The body tolerates many substances in relatively small quantities without the production of harm, but the same substances in large amounts will produce such a perversion or inhibition of normal metabolism as to constitute an injury. Under

*Read before the Union County (Ky.) Medical Society, Oct. 8th, 1908.

such circumstances these pass from the class of innocuous to distinctly harmful or toxic substances. Even the very things the body looks to for its maintenance and support, as salt, sugar, and water, may in excessive amounts become harmful."

(4) There is a condition of altered or vitiated metabolism; poisons are generated by fermentation and putrefaction in the intestinal canal; there is a lowered condition of vitality and the organs of defense and elimination are no longer able to overcome or resist the attack. One of the first results is stagnation of the portal circulation, which so hampers and cripples the liver that it is no longer capable of filtering these poisons or of converting them into non-toxic and assimilable substances; the kidneys for the time being perhaps eliminate an excess of water, but the urine is of lower specific gravity, contains less solids and is less toxic; in other words, the quantity of toxic material introduced into the blood exceeds the amount eliminated by the kidneys. With free action of the kidneys things may not go further; but if the renal elimination is insufficient, we may see developed a fraction of uremic intoxication through the simple exaggeration of intestinal fermentation. If, on the other hand, excessive vomiting has caused oliguria, we may have coldness of the extremities, paralysis of the vessels of the skin, cramps, convulsions, coma, paralysis, even death, while the kidney may not be really diseased. It is an established fact that an intoxication may result from excessive formation of putrid substances in the intestinal canal even without the kidney being diseased. The advanced studies in metabolism have modified, if not changed, the opinion commonly held in regard to the etiology of uræmia, a disease or condition which undoubtedly deserves to be classed among the auto-intoxications. It no longer suffices to say with Wilson, that uræmia is due to an excess of urea in the blood; nor with Traube that the conditions present are brought about by cerebral œdema; nor indeed can we agree with Frerichs that the system is poisoned by an excess of ammonia in the blood, or accept the theory of extractive matters as advanced by Schottin and Bencke-Jones.

Latest authorities seem now inclined to accept the conclusion reached by Bouchard that "Uræmia is a complex poison to which in unequal proportions, all the poisons introduced normally into the organism or formed therein physiologically, contribute when the quantity of poison formed or introduced in twenty-four hours can no longer be eliminated in the same time by the kidneys, which have become insufficiently permeable.

He does not agree with the opinion that has only regarded as toxic agents the substances which originate from disassimilation, but insists that it is necessary to add to them the poisons furnished by the biliary secretion, alimentation, and intestinal putrefaction. The acceptance of these views has brought about a change in the treatment of uræmia. It is no longer thought necessary to rely upon purgation to produce watery stools, nor to employ remedies to increase elimination by the skin and lungs, but, as the poison is contained in the blood and not so much in the serous stools, etc.,* it is considered more efficacious to practice venesection and to remove a certain quantity of blood in cases of uræmia in acute nephritis (scarlatinal) and in eclampsia, thereby lessening the gravity of the intoxication. Enemas of cold water, thrown high into the colon, are made use of to increase the arterial tension and relieve the stagnation of the portal system, thereby increasing the general circulation and stimulating renal activity. The use of diuretics, especially milk, intestinal antiseptics and inhalation of oxygen and of chloroform in convulsive symptoms, all of which was very ably set forth by Dr. D. O. Hancock, in a paper on "Uræmia," read before the Henderson County Medical Society a short time ago. Puerperal eclampsia, a disease so nearly resembling uræmia that it is commonly looked upon as such, is unquestionably to be classed among auto-intoxications. It may be well to call attention to the fact that auto-infection should not be confounded with auto-intoxication as the two processes are wholly distinct.

(5) "The term auto-infection is properly applied to those cases in which the virus of disease is carried locally in some part of the body, and is distributed from this locality to other parts of the body. Illustrations of auto-infection are numerous in certain diseases, and especially in tuberculosis." An individual with pulmonary tuberculosis swallows his sputum and infects his intestinal walls. Another person may carry for years a colony of tubercle bacilli in his lungs, in his bones, or in some other part of his anatomy, and then when this individual is exposed to conditions which materially lower his vitality, the bacilli which have been confined to a narrow locality, pass beyond the bounds to which they have so far been restricted, and invade every tissue, leading to acute miliary tuberculosis.

Post-mortem examinations have shown that one-third or more of all men have latent tuberculosis, and this undoubtedly is

*A bleeding of 32 grams removes from the economy more extractives than 280 grams of a liquid diarrhea does, or as 100 litres of perspiration.

the explanation of the frequently observed fact that injury to some part of the body leads to tubercular lesions in that locality. In this way we may account for tuberculosis of the hip joint, of the spine and of the meninges of the brain."

Among the well defined auto-intoxications may be mentioned that profound acidosis which is the cause of diabetic coma and less frequently of other active manifestations, notably persistent acid vomiting.

The cause for this marked production of organic acids is not known with certainty but has been attributed to the abnormal destruction of proteids. At any event, when acid production reaches an active point it constitutes a profound toxic condition calling for heroic treatment. One should not neglect to consider the possibility of its presence, not only in the graver manifestations of diabetes mellitus, but also in any case of persistent acid vomiting, either of children or in adults, and in pregnancy."

(6) Our knowledge of the normal bacterial flora of the gastro-intestinal tract is at the best fragmentary, while what we know of the bacterial flora in the diseased conditions under discussion is even more incomplete.

It may be the part played by the stomach is due to the variation of its secretive and motor activity rather than to the bacteria that may normally, or in disease, inhabit this organ. All of the many influences that tend to produce hyper- or hypo-activity or secretion, or to cause diminution of the motor function combine to establish a new environment in the intestinal tract and so are important in the struggle for supremacy that is constantly going on between the normal bacterial inhabitants on the one hand and undesirable bacteria on the other.

(7) Bouchard attributes many of these symptoms to abnormal fermentations in a stomach which in consequence of congenital or hereditary weakness of its muscular walls contracts insufficiently in the intervals between different periods of digestion. He believes that, from this cause soluble toxins are produced which, when reabsorbed, impair in varying degree the several tissues of the body. This theory would attribute the vitiation of nutrition primarily to dilatation of the stomach, but though some cases may be so explained it is certain that in the majority the dilated stomach is a secondary and not a primary event.

All of us, perhaps, in a more or less cursory way, have had our attention called to the subject of auto-intoxications, but I fear none of us has given to the subject the thought and study that its importance demands. I, for one, plead guilty to the charge, and I am also willing to admit that

when at a loss for a diagnosis I have made use of the terms faulty metabolism, auto-intoxication, just as we all have, in diagnostic stress, seized upon malaria and uric acid to tide us over a dilemma.

Never was my mind called to the far-reaching importance of auto-intoxication, as it was during the past summer, while in the East on my vacation. A party of medical men, myself included, visited some of the larger hospitals to see the work of the leaders in Surgery; we also called upon a Neurologist, whose reputation is second to none in this country, at his Sanatorium in which a patient of one of our number was being treated. It was here that the statement was made that a very large proportion of cases of neurasthenia had their origin in gastric and intestinal disturbances, most of them being due to auto-intoxication by absorption of the products of fermentation and putrefaction in the intestinal canal, and that furthermore a very considerable number of cases of insanity originated from the same cause.

We were taken through this institution and were shown case after case, and the remarks made upon them was one of the most interesting and instructive clinical lectures it has been my good fortune to hear.

The doctor said that the etiology of the disease was as yet not thoroughly understood, and that it was impossible to refer to any one cause as being the sole factor, but that he was strongly inclined to believe that errors of digestions were primarily the root of the evil; these errors of digestion by neglect, soon grow to be a source of exceeding discomfort and were accountable for a toxic condition induced by fermentative and putrefactive changes in the intestinal canal and as a consequence there was faulty metabolism, interfering with the action of the trophic nerves throughout the body, manifesting a special preference for the splanchnic area. Vasomotor disturbances followed and there was congestion of the portal system and of the liver, lowered arterial tension, etc. The symptom complex in these cases vary in degree, depending largely upon temperament, occupation, environment, heredity, etc. Particularly were those unfortunates who came into the world the victims, through no fault of their own but of their forbears, upon whom are visited the sins of omission and commission of ancestors who worshipped too freely at the shrine of Bacchus and of Venus, prone to complete nervous breakdowns. Gentlemen, all of us see these cases; they are the *bête noir* of the medical profession—men and women are its victims, perhaps more often men than women. You rarely find it in

men who lead an active out door life and in those who earn their daily bread by physical labor. It is more often present in those whose lives are passed in sustained mental effort; in business men, bankers, lawyers, in those whom dire necessity compels to stand behind desks or counters from early morning until late at night breathing the vitiated air where crowds do congregate. In men and women who only have the usual "twenty minutes for dinner" and who bolt their food and chew it afterwards. In those who have nothing to do; whose lives are spent in luxurious idleness and discontented ease, who perhaps have inherited a neuropathic tendency. These unfortunates come to us and pour out their complaints, sometimes with a volubility that is astounding. They tell you that they have bad digestion, a sense of weariness; no energy; no interest in life. That they are restless and irritable. Have headache and do not sleep well. They have neuralgic pains; their muscles tremble and their feet go to sleep. They have hot flushes; ringing in their ears; they do not remember well; have vertigo, palpitation of the heart, intermittent pulse and bad liver, with perhaps a floating kidney, etc. These patients have their symptoms at their tongues end, and before they are half through telling them you wish that they had seen the other fellow. They have gone in and out pouring their tale of woe into the unwilling ear of every doctor who is accessible. One has advised a pepsin, another a pill, and a third a course of diet with the assertion that he or she will soon be better. For a few days there is usually a feeling of improvement, but this improvement is not because of the pepsin or due to the pill, but suggestion has been implanted and the moral effect is the source of the fancied benefit. Eventually they fall into the hands of quacks or become the victims of Christian Science fakirs. In the language of my friend, Dr. Hancock, "advanced thought sends a message of hope to these unfortunates."

In the treatment of acute indigestion, from any cause, nature gives us a straight tip—vomiting and purging are plain signs that the economy is trying to rid itself of noxious material in the intestinal canal which is, by its presence, interfering with normal metabolism. What then is the tip that nature gives us? Undoubtedly to remove the offending matter from stomach and intestines. The stomach should be washed out with sterilized water as hot as can be borne, which should be repeated until the water returns clean and clear. I was about to say the colon should be douched with normal salt solution, but I have been recently so thoroughly convinced that

so-called colonic douches, or high enemas, are a delusion and a snare that I no longer order them employed.

The reason is simple, it is this: owing to the anatomical folds of the gut in the upper portion of the rectum and in the sigmoid flexure, it is almost a matter of impossibility to pass an ordinary tube high enough to flush the colon, nor indeed can the colon be filled with a Wales bougie, in the position usually advised—I venture to say that not one trained nurse in fifty can do this. The colon tube is introduced and carefully inserted perhaps for its full length, but does not go through the flexure; it simply turns upon itself and fills the rectum with tube, leaving the colon guiltless of water. So, instead of a high enema order an ounce or two of castor oil; this to be followed by an intestinal antiseptic, arsenite of copper—guaiacol carbonate—dermatol, if you like, and a hypodermic of morphia $\frac{1}{4}$ and atropia 1-150 to induce quiet and sleep. In addition to this a rigid abstinence from solid food for a few days usually completes the cure.

The treatment of ptomaine poisoning is the same, with the addition of such other means as may be necessary to restore equilibrium in the circulatory and nervous system.

The neurasthenic cases, such as I have spoken of, require such varied and special treatment that I shall not attempt to give more than an outline of it. First of all these cases need rest, both mental and physical, and the fact that this rest, no matter however applied, cannot be successfully given without removing the patient from the influence and associations of home surroundings should never be forgotten. No hard and fast rules can be laid down in all cases; not all of them require the rigorous and confining rest cure as prescribed by Wier Mitchell. Many neurasthenics are, if not permanently cured, at least greatly benefited by a sea voyage—if fortunately the expense can be borne—and I speak from a personal experience on this point, a trip abroad, not on one of those nerve racking race horses of the sea, but on a slow steamer where one can enjoy the invigorating and tonic air of the ocean; the change of environment and the thousand and one incidents of travel, all of which have a tendency to take your patient away from himself; the change of scene is so quick and so varied that a new train of thought comes with such frequency that he has no time to think of his ailments and shortly has forgotten them.

The Wier Mitchell treatment is eminently fit, and in fact demanded, for that class of patients in whom nervous symptoms pre-

dominate and which are already, or fast becoming hysterical. Those poor unfortunates, who are nervous wrecks, who no longer are interested in the affairs of life; who have lost appetite, weight and strength, have reached a point when life is a burden not only to themselves, but to their families as well. In many cases where the symptom complex has not reached this exaggerated standard, a less strenuous treatment may be given in some quiet place removed from the kindly meant, though hurtful sympathies of family and friends. The efficacy of any treatment must depend largely upon the physician and almost as much upon the nurse.

The treatment by suggestion, when intelligently employed by the physician, who, by his careful manner and by his firm though pleasant application of therapeutic measures, has won the confidence of his patient, is capable of marvelous effects in relieving the patient of morbid ideas and fancied ills.

The influence of the mind over the body was long ago demonstrated by Tuke and others, and in no way has this influence been more powerfully shown than by healthy suggestions made by physicians. There is no better proof of this than the almost daily introduction of some new fad or delusion in the treatment of disease. Auto-suggestion is also powerful for good or ill.

Abrams says, "Christian Science is suggestion plus absurdity; Divine healing, suggestion plus faith in God; Dowieism, suggestion plus prayer and holy terror; Weltmerism, suggestion plus imagination, pure; Magnetic healing, suggestion plus imagination, also; Osteopathy, suggestion plus massage; Homeopathy, suggestion plus nothing; Alopahy, suggestion plus tubfuls of drugs that either kill or cure; regular or rational medicine; suggestion plus the best common horse sense available, or suggestion and medicine mixed with the best quality of brains obtainable."

(8) Suggestion is the scientific principle at the bottom and it may be used with telling effect in all cases of sickness, and is infinitely better than the delusions of the day inasmuch as it substitutes intelligence for ignorance and does not produce that disaggregation of personal consciousness and temporary insanity that is the *sine qua non* in Christian Science, etc. We are prone to forget that we are dealing with human beings whose hopes and fears are played upon by our every word and act as subtly as the most wonderful musical instrument is touched by the fingers of the master performer. We may thus be creators of the sweetest strains of human feeling, or the

insensible performers upon "sweet bells jangled out of tune."

(9) A few words in regard to the use of drugs in these cases and I have done. While it may be true that drugs occupy a place of secondary importance we cannot afford to ignore them in the treatment of any disease.

Those members of the profession who have become nihilists and are given to sneer at the old-fashioned doctor, who still has faith in his calomel, opium, quinine, etc., are setting aside the most powerful weapon with which we are provided to conquer disease. It is becoming fashionable to speak disparagingly of the value of drugs and to look upon their disregard as an evidence of superiority in skillful treatment; certainly it will be difficult to convince sick people, especially neurasthenics, that they can be restored to health without the use of medicine. The excessive and indiscriminate use of drugs is of course to be condemned, but their moderate and scientific use, always with an eye to their physiological action and therapeutic effect, is equally to be praised. I consider nihilism in medicine to be a species of affectation, if I may be pardoned the expression—which should not be encouraged. "There is much in the training of the experienced practitioner which inspires him with therapeutic hope in a vast number of the ills of flesh. By drugs he can produce anesthesia, local or general, relieve pain, produce sleep, stimulate or depress the circulation, allay nervous irritability and aid digestion, relieve constipation and hepatic torpor, produce emesis, diaphoresis and diuresis, antidote malaria and cure syphilis. What wonder that he has confidence in drugs *per se* whilst rather skeptical of our knowledge of them? And so long as there are sick ones to heal, so long will he search for remedies—and so long will he read and believe in the literature that offers therapeutic hope."

(10) From the view point of etiology and if it be true that these toxemias manifested by symptoms protean in variety, have for their base the absorption of poisons generated in the intestinal canal which induce fermentative and putrefactive changes, the logical conclusion is to use all the means we possess to aid and assist the normal bacterial inhabitants of the intestinal canal which are the bacteria of defense, to resist and overcome the attack made by the army of bacteria from without."

Digestive disturbances first of all should be looked after; anything interfering with the digestive apparatus will favor intestinal putrefaction, and any condition favoring the latter conduces to auto-intoxication. Diet, therefore, is an important factor in the treatment. An exclusively milk diet,

which reduces to a minimum the introduction of poisonous food products, at first should be given. Milk diet is a preparatory regimen, soon to be followed by clear soup, fish, fowl and game. Massage, especially abdominal massage, and electricity are helpful. Intestinal antiseptics I consider one of our most powerful weapons. For years and years the profession has been using—without knowing it—that best of all intestinal antiseptics—calomel—in almost all diseases which affect the stomach, intestines, or liver. Carbolic acid, the sulphocarbolates, arsenite of copper, dermatol and others I have found beneficial in almost all of the toxemias, eminently so in those of intestinal etiology. The relief of insomnia—which is nearly always present—I regard as one of the most important steps in the treatment—and trional or sulphonal in a single dose of ten to fifteen grains, given in a wine glass of hot water at bed time, will usually induce quiet sleep, especially if the patient is told that the medicine will produce sleep and the benefit of the suggestion is added to the power of the hypnotic. Should these fail ten grains of veronal will accomplish the purpose in a majority of cases. It may be even necessary to resort to a hypodermic of morphia $\frac{1}{4}$ and atropia 1-150, given at bed time for two or three alternate nights, always bearing in mind the proneness of these patients to acquire the morphine habit. The risk is justified by the great benefit received. In many of these cases a loose kidney adds largely to the discomfort and requires to be looked after. The presence of indican in the urine is almost pathognomonic of intestinal putrefaction, though this condition may exist in the absence of indican.

Bibliography.

- (1) Auto-Intoxication in Disease, Bouchard.
- (2) Lauder Brunton.
- (3) Albert Abrams, Splanchnic Neurasthenia.
- (4) E. C. Smith, "Auto-Intoxications," American Medicine, July.
- (5) Cellular Toxins, Vaughn & Novy.
- (6) E. C. Smith, Loc. Cit.
- (7) Loc. Cit.
- (8) Abrams, Loc. Cit.
- (9) Dr. Geo. M. Gould.
- (10) G. Frank Lydston, Texas Medical Journal, Aug. 1908.

Ectopic Gestation.*

By R. L. Gibbon, M D., Charlotte, N. C.

A recent case of extrauterine pregnancy, which came under my observation, and

*Read before Mecklenburg County Medical Society.

which accomplished the hazardous feat of going to term, is my excuse for presenting to you a brief resume of our present day knowledge of this subject.

The clinical history of this case has already been reported in the Journal of the American Medical Association, where doubtless many of you have seen it.

An eminent authority has said that a personal experience with a case of extrauterine pregnancy is calculated to stimulate one's diagnostic acumen to the highest pitch, and hence the man who has gone through with the uncertainties and anxieties so frequently encountered in the management of such a condition, and possibly seen his patient bleed to death before his eyes, is not so apt to overlook his next case. In fact, I think it altogether probable that failure to recognize extrauterine pregnancy is often due not so much to the inherent difficulties of the situation, as to forgetfulness of its possible presence in a given case.

At one time considered a pathological freak, and a medical curiosity, whose infrequency placed it outside the scope of the ordinary practitioner, we now recognize the fact that it is this same general practitioner to whom we must look for the timely diagnosis of these cases; a matter of such grave moment that the life of the patient usually depends upon the diagnostic ability of her attendant. In the presence of so responsible a position it behooves us to recollect, whatever else we may forget, that the obscure pelvic condition we are dealing with might be one of ectopic gestation.

The relative frequency of this condition is now admitted by all, and Dr. Kelly says that it is rare to see a medical man with a ten year experience in general practice who has not had at least several cases.

No woman in the child bearing period is exempt from this peril, but it has been observed that it is most apt to occur after long periods of sterility. On the other hand, it has been seen a few weeks after confinement, and even during normal pregnancy. It is also claimed that the liability is increased with one occurrence. The etiological factors are very difficult to determine in a given case, and after we have placed full credit to the causative efficiency of malformations, the various results of inflammatory action in the tubes and ovaries, and mechanical causes generally, it is seldom possible to point out the guilty agent in a specific case.

It is generally accepted as a physiologic fact that the spermatazoa penetrating the cavity of the uterus and the lumen of the tube meets the ovum in the latter locality and there fertilization takes place. Of smaller size, the former readily passes ob-

structions in the tube that are entirely effective in arresting the passage of the larger ovum on its way to the uterus, and thus is formed the basis of a tubal pregnancy. It is also a matter of agreement that this stoppage is most likely to occur in the outer portion of the tube (ampulla), although such authorities as Kelly give six points at which implantation may take place. The same authority also states the possibility of a migration of the fertilized ovum from a normal tube across the peritoneal cavity and into the opposite tube where it may be arrested by a constriction.

For practical purposes we can ignore the rarer subdivisions and consider all cases of extrauterine pregnancy as tubal in origin, where the following changes take place. "In the beginning the tube becomes hypertrophied, swollen, and turgid, and its vascularity is greatly increased. The abdominal opening gradually becomes constricted, until finally by the eighth week it is entirely closed in a manner similar to that of the ostium in cases of salpingitis. As the ovum develops the tube becomes thin and distended, and its walls are weakened by the penetration of the chorionic villi." The subsequent developments are interesting. It is the opinion of those most competent to judge, that this anomalous condition of affairs may terminate in any of four ways: by tubal abortion, rupture of the tube, death of the product of conception before rupture of the tube, and, rarest of all, development of the fetus to full term without rupture of the tube.

The first of these, tubal abortion, cannot occur after the eighth week, as after that period the opening in the tube is firmly closed, and the fetus can only escape through a rupture. The rupture, which may be a result of traumatism, occurs in one of three directions; into the abdominal cavity; between the folds of the broad ligament; into the uterus.

The first of these may occur in any of the three varieties of tubal pregnancy, and usually results in death in a few hours, unless the bleeding can be controlled by a prompt laparotomy. In some few cases, however, the rupture takes place more gradually and the rent in the tube is plugged for a time, the hemorrhage recurring intermittently until the patient dies from exhaustion.

When by good fortune the rupture takes place between the folds of the broad ligament the bleeding is much less, being in a confined space, and stopping when this space is full. The fetus usually dies, and the hematocele thus left may be absorbed, or it may become infected, forming an abscess, which in turn may rupture in various directions. In other instances the fluid

portions of the hematoma may be absorbed, leaving the solid parts encapsulated where it often gives rise to symptoms of a more or less disturbing nature.

In those exceptional cases in which the fetus does not perish after rupture into the broad ligament, its growth and development goes on until finally the ligament gives way from over distention, and the fetus is gradually extruded into the abdominal cavity. In these unusual instances the fetus may go to full term, as in the case quoted below. Of course a survival of the fetus after any of these ruptures presupposes that the placental attachment is not disturbed.

The third line of rupture is very rare, and can only take place in one variety of tubal pregnancy, viz., the interstitial.

A tubal pregnancy may rupture at any time, but it commonly occurs about the 2nd or 3rd month. The death of the product of conception before rupture takes place, results in what is known as a tubal mole.

Should the fetus survive the dangers of rupture, and go to full term, as it does in rare instances, then the fetus dies at the end of the nine months period, after perhaps the mother has had a pseudo-labor. After death calcification may take place and a lithopedion be formed, or the fetus may become mummified, and finally the soft parts may be absorbed and nothing remain but a skeleton. After any of these changes encapsulation takes place, and the entire mass remains quiescent for years, but is a constant source of discomfort and danger, as it is liable to become infected.

At the colored hospital in this city, Dr. C. M. Strong and myself operated upon a woman who had borne this kind of a burden in her abdomen for nine years, and then sought surgical relief only because infection had taken place in the sac, and pus was discharged through umbilicus. The fetus was a fine specimen of a lithopedion, and was of full size. The odor that assailed us on opening the abdomen was something appalling. The woman died.

The diagnosis of ectopic gestation can usually be more readily determined in the early stage, as it is then easier to recognize the mass as distinct from the uterus. Later on it is sometimes very difficult to do this, short of exploring the interior of the uterus. Kelly lays great stress on the discharge of decidua, and states that in doubtful cases it is proper to curette the cavity of the uterus in the hope of finding the membrane and thus clearing up the diagnosis.

In the case quoted below this membrane was passed in its most characteristic form.

Patient.—Mrs. Q., aged 41, married 17

years, had never been pregnant before unless a very indefinite history of miscarriage many years ago, be admitted as such.

History.—The last regular menstrual period occurred July 11, 1907. A few weeks later there was a flow from the uterus which was not very free, but persisted for one or two weeks, stopped, and then returned for a time. She was at home in Philadelphia at this time and was examined in the latter part of October by her family physician, who pronounced her pregnant. Returning to Lincoln, N. C., she came under the care of Dr. Wise, who took her to the Presbyterian Hospital at Charlotte during the last week in November. At this time, about four months after the last menstruation, the patient had become very uneasy about her condition and feared an abdominal tumor.

Examination.—Examination disclosed an abdominal mass corresponding in size with the supposed stage of pregnancy. Bimanually ballottement was easily obtained, but the presenting part of the fetus was not readily made out. No fetal heart sounds were heard, but uterine souffle was pronounced. The diagnosis of pregnancy was confirmed and the patient returned home.

Subsequent History.—Nothing more was heard from the patient until May, 1908, when her physician told me that the patient had gone a month or more over her time, that fetal movements had entirely ceased for six weeks, although they had been vigorous and even annoying up to that time, and that the patient's general condition was not good.

May 6: She was brought to the hospital again, and the following history was obtained covering the period since the previous November: Abdomen continued to enlarge up to six weeks ago, when severe pains, of an intermittent character, came on and the patient, supposing she was in labor, summoned her medical attendant. Matters did not progress, however, and after a time the pains ceased. Fetal movements were not noted after this pseudolabor. From the fourth to the end of the ninth month the patient suffered continuously from abdominal pain and gastric disturbances. On several occasions a membranous substance was discharged from the vagina, and on one of these occasions the membrane discharged resembled a cast of the uterine cavity.

Examination.—It was easy to make out by palpation the parts of a well-developed child. Vaginal examination disclosed the head presenting, it being felt apparently in the posterior cul-de-sac; the os was not patulous. In addition, two masses were felt through the abdominal wall which were

supposed to be fibroids. Uterine souffle was absent.

Operation.—On May 9, the abdomen was opened in the median line. The omentum was found firmly adherent to two medium-sized fibroid tumors on the anterior surface of the uterus and completely prevented any view of the organs beneath. What was more surprising however, was the condition of the omentum itself; it was almost perfectly black, as though on the point of becoming gangrenous. As a consequence, a large portion, about two-thirds, was ligated in sections and removed. The uterus was then seen to be enlarged to the size of a four-months' pregnancy, while behind and to the right was a dirty, brown colored mass, which on being opened disclosed a fully developed male child, in a somewhat macerated condition. In spite of the fact that the child had been dead at least a month, the placenta was found firmly attached and no effort was made to detach it, but instead it was found possible to remove about three-quarters of the sac, including that portion to which the placenta was fixed. The remaining portion of the sac was brought out at the lower angle of the wound, the edges clamped with forceps and the cavity packed. The abdominal incision was closed in the usual manner, except at the lower angle.

Result.—The patient ran a moderate temperature during the separation of the remainder of the sac, and developed a mild phlebitis of the right leg, but in other respects the recovery was uneventful. I am unable to explain the condition of the omentum, which may have been due to an infarction, but at time of operation its appearance gave rise to the gravest apprehension.

Treatment of Habitual Scoliosis by Passive and Active Correction.†

By Theodore Toepel, M.D., Atlanta, Ga., Lecturer on Medical Gymnastics at the Atlanta College of Physicians and Surgeons; Director of Physical Education in the Atlanta Public Schools.

The causes of habitual scoliosis are manifold, some of the most important and the most frequently met with are asymmetry of the head, asymmetry of the pelvis, short leg, and asymmetry of the spine itself. Asymmetry of the head is a factor not often taken into account. Ocular defects, causing improper balance of the head, are an obvious cause. Asymmetry of the pelvis, as described by Barwell, is accounted as a not infrequent cause of asymmetrical positions. The shortness of one leg is so common that it fails to

†Read before the recent meeting of the Southern Medical Association at Atlanta, Ga.

attract the attention that it deserves. Asymmetry of the spine itself and unequal thickness of the vertebral bodies on the right side as contrasted with the left is a demonstrated condition.

All these defects of conformation must lead to some lateral deviation of the spine. It depends upon the individual whether these are taken care of by nature in some compensatory way, or whether they cause a deviation notable enough to be classed as deformities.

Aside from the structural defects causing asymmetry and consequent lateral curvature are to be found the faulty postures resulting from attitude and occupation, which must be accounted another important factor in producing lateral deviation. Habitual lateral bed postures curve the spine. By favoring the growth of the spine on one side and retarding it on the other, there is a tendency to fix a lateral curve by establishing physical changes in the bones, ligaments and muscles. The twisted position in writing as generally practiced is more frequently than anything else a predisposing cause of many lateral curvatures. Playing the violin in the usual standing position, sitting in narrow school desks on one side, carrying school books on one hip or in one hand, pains on one side of trunk caused by furuncles, abscesses, lumbago, contusion of chest wall, pleuritis and intestinal troubles, sports such as tennis, fencing, golfing, etc., and trades as that of the carpenter, etc., have no doubt contributed to the bringing on of lateral curvature. Other similar causes might be enumerated, but the aforesaid will suffice to look for these and related conditions in examination.

I claim that the cause of habitual scoliosis lies in the loss of equilibrium of the long muscles of the back (*erecti spinæ*). As in the above mentioned examples, lateral curvature develops because of under activity on one side of the muscles of the back, so also can we hope to correct the lateral curve by strengthening the muscles on the opposite side. This does not pertain to those cases alone where one sided muscular activity is the cause, but it is also of primary importance to all other cases of scoliosis regardless of origin; because the strength of the *erecti spinæ* muscles on the convex side is the only latent power in the back which can correct the scoliotic spinal column. The muscular strength on the convex side is surpassed by that on the concave because of continued activity of long duration, extending in some cases over a period of several years. Through the entire convex curve, the distance between the origin and the insertion of the *erecti spinæ* muscles is greater and the muscles, having accustomed

themselves to this position, become too long; their contractile power is lost. The opposite is true of the muscles on the concave side, these muscles retaining the pathological scoliotic spinal column. This difference in the contractile power of these two sets of muscles may be easily proved by the lifting of weights. At first sight an operation to shorten the muscles on the convex side seems one to be considered, yet the flat muscles of the back themselves are not adapted to this operation and the necessary fixation of the trunk after the operation for a period of from 6 to 8 weeks undermines the muscular system of the youthful body to such an extent that, as a rule, this operation is not resorted to. Thus the only method to employ is that of localized gymnastic exercise by which muscular fibre is strengthened and increased, thereby improving lost contractile power and the physiological function of the muscles, at the same time making the spine more flexible by overcorrecting exercises and holding the spine in the improved position between treatments.

The most important and sole purpose in the treatment of every case of scoliosis, no matter what the cause may be, is the strengthening of the muscles on the convex side by gymnastic exercises. This therapy is sufficient in cases where no rigidity or deformity have developed and fortunately in a large number of cases which come under the observation of the physician this stage of the disease has not developed. If rigidity and transformation of the vertebrae are present, it then becomes necessary to relieve the rigidity as far as possible which is caused by the contraction of the ligaments on the concave side. This last step, and the most tedious, is to endeavor to transform the deformed vertebrae into normally shaped bones.

It is a well established fact that weak trunk muscles are strengthened by gymnastic calisthenic exercises and the more complicated exercises on rings, horizontal and parallel bars, stall bars, orthopedic gymnastic, plinth, etc. Drooping head, shoulders and otherwise faulty carriage in children, due to weak muscles, can be corrected in a general course of exercise at a gymnasium without the attention of a specialist and in a short time an erect and firm carriage is attained. Also patients afflicted with a slight curvature are materially benefited by a general gymnastic course of exercise in so far as the back is strengthened, and the inclination to speedy fatigue and to lateral drooping is overcome, but that a well defined case of scoliosis can be cured by a general gymnastic course of exercise is out of the question. If my assumption is correct, that is, if the muscular strength

on the convex side is insufficient to maintain the erect position of the spinal column, in other words, when a permanent lack of symmetry exists, it becomes evident that a general course of gymnastic exercises is insufficient. *A uniform developing of the left and right erecti spinæ muscles will not alter the disproportion. A rational treatment aims at a one sided development of the weaker muscles of the convex side.*

Sayre's suspension apparatus has been extensively used in connection with gymnastic exercise. During suspension most scoliotic cases show an encouraging improvement of the curve and great results were expected from this simple treatment. But suspension does not influence the muscles, it does not alter the already mentioned disproportion and its use is of such relatively short duration that it has no corrective effect on the scoliotic spinal column. It must be admitted however, that suspension has a beneficial effect in loosening the shortened ligaments and muscles on the concave side.

The attempt has been made to render the temporary effect of the suspension permanent by applying the plaster jacket, orthopedic corset, etc., while the body was suspended by the head and the scoliotic condition corrected as far as possible. I now enter upon the most difficult and at the same time most disputed point in the treatment of scoliosis. Prominent orthopedic surgeons use the plaster jacket or orthopedic corset in the treatment of almost every case of scoliosis and other authorities, as for example the prominent Dr. Schulthess, a leading authority in the treatment of scoliosis, opposes most emphatically the plaster jacket or orthopedic corset.

I readily see that by means of a closely fitted plaster jacket, such as employed by Wullstein, enclosing trunk, neck and head, a corrected position is attained, but by its use the harm done to the muscles of the back, to internal organs and to general health of the patient is much greater than the good derived from it. In recent years many physicians have adopted the use of the adjustable orthopedic corset made of leather, celluloid or plaster, etc., in place of the non-adjustable plaster jacket on account of the unfavorable results above mentioned, though the corrective effect is not as permanent as that of the non-adjustable jacket, because the patient, left to adjust it himself, will not attain the corrective effect as accurately.

As before stated, in all scoliotic cases a disproportion exists between the muscles of the left and right sides of the back. The important point is, to strengthen those sets of muscles which correct the scoliotic con-

dition, thereby re-establishing the equilibrium. To attain this result the treatment is based upon principles which may be taken under the following heads: (a) The stretching of the shortened ligaments and muscles on the concave side by *active, assistive and passive* exercises. (b) To strengthen and shorten the muscles on the convex side by *active resistive* exercises. (c) How best to maintain the improved position.

(a) The best way of stretching the shortened ligaments and muscles on the concave side is by means of *active assistive and passive* exercises with the necessary apparatus such as rings, pulley-weights, stall bars, Schmidt's suspension apparatus with exercise, plinth, etc., relieving the rigidity of the spinal column. In order to obtain the best possible results from this mobilizing and stretching treatment it is necessary to produce a fixation of the spine in its corrected position at all times when the patient is not doing the correcting exercises. This is best done by letting the patient sleep in an orthopedic bed (by Lange) where head and hips are fixed between pommels and the curves are overcorrected by means of belts. I have found this method satisfactory in every case in which the bed has been used. During the day, when not exercising, the patient must wear a brace (by Schlee) which holds the body and head in the corrected position. This is the *passive* corrective part of the treatment. Though a staunch believer in the value and efficiency of exercise in scoliosis, I have come to the conclusion that the improved spinal column, as the result of a medical gymnastic treatment, must be fixed in a supporting and correcting apparatus between treatments.

(b) The most efficient way to strengthen and shorten the muscles and ligaments on the convex side is by *active resistive* exercises with and without medical gymnastic apparatus. I prefer the active resistive to the purely active exercises for this part of the treatment because the physician is better able, either by his own resistance or that of the patient's, to strengthen and shorten the effected muscles in a more localized and direct manner. I have found it necessary to use the supporting apparatus during this part of the treatment also until the muscles are sufficiently strengthened to maintain the spinal column in a normal position.

(c) After removing the supports, the improved position must be always maintained while sitting, standing or lying. The best possible posture is to be maintained while sitting, whatsoever the occupation of the moment may be. It is most readily obtained by sitting with the sacrum, loins, dorsum and shoulders well supported against

the back of the chair, which should be moulded to the normal shape of the spine. Standing at lessons or any other occupation should be avoided when possible; when unavoidable the patient ought to stand on both feet with heels three to four inches apart. Standing on one foot is most injurious, as it at once throws the spine in a serpentine position. A short leg may be compensated by a thicker sole. As the time spent in sleep is from one-third to one-half during the growing period a proper bed posture is an important factor.

The Diagnosis of Perforation in Typhoid Fever.[†]

C. W. Strickler, M. D., Atlanta, Ga.

To successfully treat cases of perforation of the intestine in typhoid fever an early diagnosis is essential. The problems presented by these cases are frequently the most difficult we are ever called upon to solve. The classical picture may be so nearly simulated as to lead the best diagnosticians into error. To weigh and value the indefinite symptoms that confront us in atypical cases, requires sound reasoning, diagnostic skill and clinical experience. There are cases that no one is able to diagnose, because of the absence of any suggestive symptoms, as Delafield says: "They simply at some times grow sicker than they were before and there is nothing to show the existence of a perforation or peritonitis." The diagnosis is made still more difficult when we remember that any or all of the subjective and objective symptoms may be present and yet no perforation exist. Sometimes the cause of these symptoms can be discovered; frequently they cannot. The two following cases will serve for illustration. The first case is one that I have to report largely from memory on account of the fact that the record has been misplaced. However, I am satisfied that my report will be in the main correct. A negro man in the third week of typhoid fever with no very unfavorable symptoms suddenly went into a state of collapse; had abdominal pain, tenderness on the slightest pressure, great rigidity of the muscles, marked distention, disappearance of liver dullness in the mammary line; cold, clammy perspiration; lowering of temperature and rapid feeble pulse. This patient died within a short time. The post mortem revealed absolutely nothing to account for the clinical picture except an unusually inflamed gut.

The next case is one that has already been reported by Cushing. I take the lib-

erty to again report this case to illustrate the condition that I have already mentioned. On the fifty-second day patient had a relapse, temperature 103. The following day it went up to 105, nausea and vomiting without abdominal tenderness; white cell count 16000. Condition continued for forty-eight hours, right iliac slightly resistant; patient had had a phlebitis in left calf that had about cleared up; some tenderness was now noticed in the right half. Two days later began to complain of abdominal pain—no objective abdominal symptom; tenderness in both calves. One day later child awoke with sharp abdominal pain unlike anything she had previously had; some nausea and slight vomiting followed; white cell count 11000. Two hours later complained of colicky abdominal pains; thighs kept flexed; slight distention; liver dullness lacked one finger's breadth of reaching costal margin; wall somewhat tense, with moderately deep pressure in iliac region muscle spasm was elicited and patient would cry out with pain; chief rigidity was above the level of the umbilicus. White cell count 8200; vomited 20 c.c. of nourishment. Exploratory operation showed nothing except the inflamed Peyer's patches. Dr. Cushing showed the following note: "The patient showed no ill effects from the exploration; no subsequent nausea or vomiting. Leucocytosis disappeared and she passed through an uneventful relapse of fever. The two following cases will serve to illustrate the atypical cases. The first case is that of a Greek who could not speak English, therefore it was with great difficulty that we could ascertain the facts in regard to his subjective symptoms. This was a typical case of typhoid fever in a mild form. On the fifteenth day of the disease, at 2 a. m., he began to complain of abdominal pain, followed by a large brown fluid stool; temperature 101.1-10, pulse 78 respirations 22. One hour later temperature 99.1-100, pulse 82, respiration 24. At 6 a. m. a large yellow stool; slight abdominal pain; ice cap was applied to abdomen; temperature 102, pulse 88, respirations 22. At the same hour the day before his temperature was 102, his pulse 100 and respiration 24. During the day the patient's temperature did not exceed 102, nor did his pulse go higher than 92. At 3 p. m. the respiration was 28 for a short time. With this exception they were from 18 to 22; had a few slight rigors during the day. When seen about 12 o'clock his condition appeared good; abdomen soft, apparently not much tenderness, pain had disappeared following the application of ice cap, very slight distentions pulse was good, about 92 to

[†]Read before the recent meeting of the Southern Medical Society, Atlanta, Ga.

the minute, expression rather dull. Had a comfortable day and slept well during the night. On the 17th day there was no marked change till 9 a. m., at which time his after-bath temperature was 98, pulse 100, respirations 44. When seen at 1 p. m. last recorded temperature, 11:25, 101; his pulse was 110, respiration 32, had a rather anxious expression, skin was moist, abdomen greatly distended, muscles rigid, absence of liver dullness, tenderness over the whole abdomen; white cell count showed them to be about normal. Abdomen was opened and a perforation was found in the ilium about 6 inches from the cæcum. This patient had his first unfavorable symptoms on the 15th day of the disease; they were slight abdominal pain, followed by a large yellow fluid stool; slight rigors; nourishments were refused; practically no change in the pulse temperature and respiration. The ice cap relieved the pain. During the following day and night there were no more unfavorable symptoms. Not until 9 a. m. on the 17th day did the case simulate one of perforation, and not until 12 were these symptoms at all marked. Judging from the pathology found in the abdomen, viz: general peritonitis, coils of intestines bound together by a thick exudate. I would say that this case perforated at the time of first symptoms in spite of the fact that the picture was very imperfect.

The next case was another mild case of typhoid. On the 24th day, between 9 and 10 a. m. patient complained of slight abdominal pain and of being chilly; temperature and respiration were not recorded. At noon temperature was 101, pulse 118, respirations 24; abdomen slightly retracted, very little rigidity, slight tenderness over lower right quadrant; face was pale, but the expression was placid; blood count at 1 p. m. showed 10600 whites, at 3 p. m. temperature 101 deg., pulse 108, respirations 24. Very slight, if any distention, slight pains slight tenderness in same locality liver dullness absent in the mammary line. Abdominal facies absent; white cell count 13600. The symptoms in this case were so mild that they would hardly attract one's attention if you were not looking for some complication. The diagnosis was made in this case mainly on the evidence presented by two symptoms; sudden disappearance of liver dullness, with very slight, if any, distention, and the gradually increasing white cell count. This patient did not have an anxious expression at any time until after he was informed that an operation was necessary to save his life. The perforation in this case was found about six or eight inches from the cæcum, in the ilium.

The diagnosis of the typical cases is usually easy because of the fact that the symptoms are so pronounced that our attention or that of the nurse is immediately attracted. It is the atypical cases, with mild symptoms that are overlooked until too late to render surgical aid. How are we to recognize these cases? I believe that most of them that show any symptoms at all will be recognized early enough for successful operation if the following is carefully carried out: First. Do not administer any form of opium for any purpose during the course of this disease. Speaking generally, I believe that the use of this drug is only justifiable in cases of hemorrhage, and even here it may obscure the symptoms of a perforation occurring at the same time; but in a case of this kind I believe it is the least of two evils. I believe too it would be the part of wisdom to keep the ice cap off the abdomen of these cases. Recently its use has become quite common, but after watching for good results following its use I am of the opinion that it is of little, if any value, and as in the first of the atypical cases I reported, it may obscure the important symptom, pain.

Second. During the third and fourth weeks a daily blood count should be made because if we are not familiar with the patient's blood count from day to day we cannot properly interpret the variations that might occur with symptoms of this complication. If some such symptoms should occur it would be proper to have a white cell count made every hour and I believe that our clinical experience has now taught us that in most cases having a fair degree of resistance we would expect a gradual increase of the white cell count and in cases low resistive power we would expect the reverse. In either case there may be no change. The main significance of the white cell count is to inform us that peritonitis, either local or general, is present. We must remember the fact that in many instances we have a high white cell count without discoverable cause.

Third. I would lay especial stress upon the importance of careful physical examinations of these cases at the very beginning, particularly locating the areas of liver dullness. I have seen one individual in apparently perfect health, with absolutely no indication of any trouble whatsoever with the liver, that had an absence of liver dullness in the mammary line. Any change should be noted from day to day because the sudden disappearance of liver dullness with little or no distention, is a sign of the greatest value. Disappearance of liver dullness accompanying great distention is of little value and not to be relied upon.

Fourth. The slightest abdominal pain should receive the close attention it deserves, especially so if there is the slightest tenderness and rigidity below the level of the umbilicus. For pain is stated by most authorities on this subject to be the most constant symptom. While it may seem that we are trying to draw the point too fine, yet I must say that I believe it is an unwise procedure during the third and fourth weeks to use drugs that cause a rapid drop of the temperature, for the reason that a sudden drop of the temperature is sometimes the only symptom of perforation. These drugs are of no real value and are just as well left off for other reasons.

Fifth. A very careful study of the patient's expression each day is very essential. All observant clinicians will tell you that there are very slight changes sometimes that have great significance that would be overlooked by the casual observer. The plan that I have outlined requires time and patience, but the results obtained fully repay us.

Bibliography

- Delafield, Francis, Delafield's notes.
 Osler, Thayer, Cushing and others, "Studies in Typhoid Fever."
 Osler, William, "Practice of Medicine."
 Sahli, Hermann, "Diagnostic Methods."
 Nothnagel, Hermann, "Diseases of Intestine 7 Peritoneum."
 MacKenzie, Hector, "The Practitioner, January, '04"
 Brannan, J. W., "Twentieth Century Practice of Medicine."

The Therapeutics of Pharyngeal Catarrh.†

By Dr. S. Kirkpatrick, Selma, Ala.

That protean symptom, Catarrh, is produced by both local and constitutional conditions. No one factor, either local or constitutional can be accepted as the cause of a given disease. As in general surgery, we have oftentimes neglected our patient by concentrating our attentions on his focal point of disease, which may be only an expression of a more widely spread disorder. No doubt it has been the experience of all of you to have patients who, in spite of your brilliant surgical technique on the septum, and the most painstaking explorations of all accessory cavities, refused to be discharged, or went the rounds of colleagues collecting formulæ for sprays and douches and finally fall a victim to the habit of some patent nostrum for the cure of catarrh. It is for this class of patients who have failed

to obtain the desired relief from the catarrhal symptoms, after all abnormalities of the nose and throat have been corrected, that I have evolved the following line of treatment with more or less satisfactory results. The constitutional factor in these cases, omitting such specific causes as LaGrippe, Ozena, and Syphilis, is a faulty metabolism with its attendant auto-intoxication, and the index to this condition is found in the urine, a practicable knowledge of which can be obtained by simple tests which can be performed in the office in a few moments, and will be described later.

Man may be likened to an industrial laboratory, which in the manufacture of certain products, many by-products are incidentally elaborated. In the course of normal digestion, assimilation, and excretion, our by-products are harmless, but should any of these functions become perverted or aborted, our system is loaded with poisonous material. Auto-intoxication is an old story, but it was probably first clearly recognized by Chas. Bonchard in 1887. Man, he said, is constantly standing, as it were, on the brink of a precipice. Every moment of his life he runs the risk of being overpowered by poisons generated within his system. The healthy and unhealthy body is a receptacle and laboratory of poisons. Auto-intoxication may be due to over-production or faulty elimination. Wherever there is an excess of toxic material with which the liver is unable to cope and the strain is thrown on the kidneys, elimination proceeds through the skin, nasal, and pharyngeal mucous membranes. Kyle has shown that the chemistry of the nasal and salivary secretions is altered under certain conditions, rendering them irritating. Talbot calls attention to the fact that the acidity of these secretions is the result of an acid auto-intoxication. Dr. Michaels of Paris, has done considerable work on the hyperacidity of the saliva and has determined that when the blood becomes of a lessened degree of alkalinity because of the accumulated acid products of a faulty metabolism, the secretions and excretions of the glands become acid in reaction. This acidity is not to be confused with uric acid. The normal degree of acidity of the urine is from 30 to 40 degrees. When the degree is above 40 it indicates over-production, and a constitutional stress allied to that of diabetic acidosis. If below 30 the difference between the degree indicated and 30 shows the degree retained in the system. It indicates suboxidization, imperfect elimination. Excretion and elimination are the two principal functions of the kidneys. Excretion does not imply elimination, as is seen in certain nervous states, diabetes insipidus

† Read before the recent meeting of the Southern Medical Association, Atlanta, Ga.

and lues. In renal insufficiency a lessened proportion of the substances usually eliminated occur in the urine, the rest being retained in the circulation. The method of obtaining the degree of urinary acidity is that given by Neubauer and Vogel (Quantitative and qualitative analysis of the urine—English edition—Wm. Wood & Co., 1879) as follows: One burette 50 cc., one wooden stand; one cc. graduate and one small glass. Place the burette in the wooden stand in the upright position. Fill the tube with 1-10 normal sodium hydroxid solution to zero. To 10 cc. urine in a small glass add 4 drops of 1% alcoholic solution of phenolphthalein and drop by drop the solution of hydroxid until a decided pink color is produced. Having noted on a piece of paper the number of cc. of the sodium hydroxid solution in the burette before and after the pinkish color is obtained. The number of cc. displaced multiplied by 10 (in order to find the number of cc. sodium hydroxid necessary to reduce 100 cc. urine) equals the degree of acidity. Instruments must be kept clean and each step of the operation carefully noted to get good results. Another evidence of gastrointestinal toxemia found in the urine is indican. The presence in the urine of indoxyl-potassium sulphate is one of the chief signs of a toxemia. It indicates that somewhere in the alimentary tract proteid elements are undergoing putrefactive decomposition. Even the slightest trace of indican in the urine is abnormal, as under no circumstances can putrefactive fermentation be considered physiological. There are many tests for indican, but the one I use and like is the one devised by Dr. Donald, and reads as follows: To 10 cc. of filtered urine add one drop of a 1% solution of Pot. Chlorate, then 5 cc. of chloroform, and lastly 10 cc. of fuming hydrochloric acid (Sp. Gr. 1.19) pour from one tube into another several times. Maximum discoloration occurs in ten minutes. The indigo will be dissolved out by the chloroform. In the absence of either extrinsic or intrinsic putrefaction the chloroform will settle to the bottom of the fluid in the test-tube and remain pure white. This indicates a perfectly normal state. Any discoloration whatever indicates a toxemia, unless the patient is taking iodide of potash, when a bright red color will be produced. When pronounced toxemia is associated with the putrefactive process, there is often a breaking up of the hemoglobin and the formation of a red pigment, or there may be some occasion to the internal ends of the bile ducts. When this is the case the bile pigments, acids, and salts re-enter the blood and finally the urine, various toxins also

enter into the urine. When this is the case the pigments or toxins interfere with this test reaction; that is to say, these substances are added to or precipitated with the indigo produced by the oxidation reduction of the indoxyl-potassium-sulphate. Now instead of the sharp and distinct blue reaction, a dirty blue, purplish, or reddish color is obtained, the shading in color depending in a large measure upon the form of pigment or toxin entering into the combination. This result indicates a more or less complex toxemia in addition to the simple indicanuria. A discussion of the theories of the significance of indicanuria and abnormal acidity of the urine would be interesting, but not at all necessary in this paper. It is sufficient to know that their presence in the urine is an evidence of a toxemia, which produces well marked symptoms of irritation of the structures of the nose and throat, and responds to appropriate treatment which will cause them to disappear from the urine, relieving many of those troublesome symptoms of naso-pharyngeal-catarrh.

Indicauria and acidosis are usually associated conditions with one or the other in the ascendancy. A little work in urinalysis in connection with your other examinations of catarrhal subjects, will enable you to determine, from the symptoms and appearance of the mucous membranes, which toxic element predominates in the urine.

In acid conditions there is usually a hyperasthetic condition, not only of the Schneiderian membrane, but of the whole area supplied by the fifth nerve.

One patient, aged forty-five could not bathe his face in the morning with either hot or cold water without bringing on fits of sneezing lasting for hours. Another, aged forty-five, a physician, whose fifth nerve area was so sensitive, that paroxysms of sneezing were brought on by a strand of his wife's hair brushing across his face. He had hydrorrhea, lachrymation, and mild asthmatic seizures at any or all times. His nose had received the usual local treatment at the hands of a noted Rhinologist without obtaining any relief whatever.

This class of patients will tell you that they cannot sit on the porch bare-headed or otherwise expose themselves to draughts of air without catching cold. That type of hyperasthetic rhinitis presenting a picture of perpetual or pseudo-hayfever belong to the acid type of toxemia, and is one of the easiest of all conditions remedied on this hypothesis. All acute exacerbation of chronic nasal catarrh, and all acute colds, not of the specific or contagious form, are but local manifestations of a constitutional acid intoxication.

This class of subjects are usually addict-

ed to the sugar habit. They consume large quantities of sweets either in the form of candy, pastries, or cane syrup. The latter is one of the worst forms of saccharines, either because of its palatability too much is eaten, or to some inherent indigestible quality. The habit of soft drinks, which prohibition laws have popularized, is another source of danger. Very few people know that each glass of this slop contains at least a tablespoonful of sugar. The human economy cannot digest and assimilate large quantities of sugar. In a concentrated form it is an irritant to the gastrointestinal tract producing congestion of its mucosa. However, excessive applied to these cases is a relative term. The amount that would cause saccharo-butyric fermentation and acidosis in one patient can be eaten with impunity by another.

If indican is the predominating element in the urine, we have a picture of vasomotor disturbance with an elevation of blood pressure. They are the hawking, spitting set who tell you that their catarrh has gone to their stomachs and possibly all over them.

Lassitude, dull headaches, hoarseness, recurrent sore throat, tinnitus aurium, dyspnoea, and indigestion are a few of the symptoms complained of by these patients. The mucous membranes of the nose and throat present a dull red or beefy appearance. They are subjects for repeated cauterizations of the inferior turbinate from which a certain amount of relief is obtained for a while. As a rule they eat too much of every thing, especially meats.

These two conditions are usually blended. All of the symptoms are worse in the early morning hours, because, as Kyle has demonstrated, the nasal and salivary secretions are more acid at that time.

Treatment.—We should inquire minutely into the habits of our patients. Those leading sedentary lives should be encouraged to indulge in some form of active exercise for a period each day. This will increase elimination through the skin, and burn up the nitrogenous intake. Constipation must not be allowed. Many of these patients will declare that they have regular bowel movements daily, when a closer investigation will disclose a dilated ascending colon, and if given a hot lavage followed by a pint of warm cotton-seed oil introduced high into the colon and retained over night, will pass large quantities of scybalous masses. This should always be done in stubborn cases, and should be administered either by the physician himself or a trained nurse. The relief is often prompt and decisive. It is well to begin the treatment with calomel and to give small doses of it

at different times as indicated, followed by a saline the next morning. The effervescent form of magnes. sulphate is probably the best. I have had the following formula made into an effervescing powder and like it very much indeed. Each drachm represents:

Sodium Sulphate (dry)	10 grs.
Sodium Salicylate	3½ gr.
Lithium Benzoate	1½ gr.
Tinct. Nux Vomica	1 min.
G. E. Base	Q. S.

A heaping teaspoonful in a glass of water every morning before breakfast.

If the degree of urinary acidity is above 40 give sodium bicarb. in drachm doses at night, or oftener if necessary. I have frequently given as much as one ounce in 24 hours. Get a good article like Mercks or Squibbs, and do not tell your patients to take soda or salts, for obvious reasons, but write a prescription for it. If below 30 degrees give diuretics and purgatives. For irritability of the fifth nerve area gives gelsemium in dose enough. I usually give five drops of the tinct. every three hours until relieved or double vision occurs. The paroxysms of sneezing attending the pseudohay fever can be controlled until the cause is removed, by Atropine or Hyosyamine with Strychnine. A frequent urinalysis will furnish a key to efficient treatment, designed to check the putrefactive and fermentative changes in the bowel and thus prevent the formation and absorption of the toxic products, and the consequent intoxication therefrom.

If indican is present intestinal antiseptics are indicated. By relieving hepatic insufficiency and biliary stasis, pilcholith acts well in that form of toxemia known as biliousness. Guaiacol Carb., Aspirin and the Sulpho-Carbolates will inhibit the growth and development of the intestinal flora, as will also the lactic acid in buttermilk, of which I always advise my patients to drink freely. Nitrogenous foods and sugar should be limited, and all forms of alcohol, especially beer, prohibited. All bad habits of living must be corrected. The quality and quantity of clothing should receive our attention. An abundance of fresh air both day and night, and the free use of water internally and externally insisted upon.

The local treatment of naso-pharyngeal catarrh is largely a personal equation. The physician will select soothing, stimulating, cauterizing, or astringent agents, as the conditions present may require. However, we must bear in mind that all cleansing lotions should be alkaline and isotonic with the nasal secretions.

This paper, of course, presupposes that all abnormal or pathological conditions within the nose and throat have been re-

moved or corrected by the proper surgical technique.

Principles Concerned in the Diagnosis of Intra-Abdominal Tumors.*

By G. Paul LaRoque, M.D., Lecturer and Bedside Instructor in Surgery and Genito-Urinary Diseases, University College of Medicine, Richmond, Virginia.

It is neither necessary nor profitable nor even interesting for one on such an occasion as this to epitomize or even to summarize the various differential diagnostic features of the many intra-abdominal affections characterized by tumor formation. I am convinced, however, that there is ample reason to emphasize the importance of well known underlying principles by which to be guided in the study of intra-abdominal tumors, and that when these principles are conscientiously applied in each individual case, exploratory incisions for non-operative lesions will diminish in number correspondingly with the increase of deliberate and properly planned operative procedures for therapeutic purposes.

There is a tendency on the part of that peculiar type of surgeon, cursed with an ambition to increase the number of operations he performs, to hastily say to a patient, "You have a lump in the belly which must be removed." There is another group of surgeons who reluctantly admit that the essential point to determine is whether a given case should be treated *medically* or *surgically* and not so much the exact character or starting point of the disease process." While this teaching is the main not unsound it does not carry with it the privilege of hastily making exploratory incisions in non-emergency cases unless preceded by a preliminary utilization of every resource in the effort to determine the location and nature of a given tumor, together with the complications and coincident conditions present, so that a proper line of action may be planned and a correct prognosis given. I have repeatedly heard bold and busy operative surgeons forcibly state to patients after scarcely more than a glance, "There is no way on earth for any one to determine the nature of your trouble till you are operated upon." As a matter of fact, it is unfortunately true that in some cases such a statement is essentially correct, but do let it come after, instead of before, a conscientious effort, and when permissible a reasonable length of time. An operation performed for a non surgical condition is sometimes the cause of at least an unappreciative frame of mind on the part of the

patient toward the surgeon, and when followed by some crippling sequel or fatal catastrophe is the source of even more chagrin than the discovery that the incision had been made over an area remote from the real seat of the disease or that the operation has been followed by no relief of symptoms. Who can imagine a more painful disappointment to the patient or duty of the surgeon than to have to admit that the operation previously designated as an easy, safe, and positively curable procedure had revealed a most serious or inoperable, malignant and surely fatal disease?

And yet I would not for a moment discountenance the use of the scalpel as an instrument of precision in the diagnosis of obscure intra-abdominal tumors. On the other hand exploratory incision is certainly essential and should be resorted to early for this purpose in many cases. Surely a patient is just as dead if he dies under the care of the physician as if death follows a surgical operation, and on account of the well known fact that all intra-abdominal tumors which demand surgical treatment can be most readily removed while the lesion is yet in an early stage of development, it is the plain duty of the surgeon to employ in really doubtful cases the exploratory incision. The plea I should make, therefore, to both physician and surgeon is, "Do to others as would have done to you."

When each patient with an abdominal tumor is intelligently and conscientiously studied in the light of a proper history of the evolution of the symptoms together with a thorough examination, many exploratory operations will be substituted by therapeutic ones, much disappointment and chagrin will be avoided, and the conscience of both physician and surgeon will be free from many sins of omission and commission.

And, finally, if the recorded history and detailed description of all the symptoms and physical signs noted before operation be compared with the operative findings and subsequent history of the case, the art of diagnosis will improve at a rate comparable in rapidity to the improvements made in technical operative skill.

It cannot be denied that there is a great deal of disparity between the statement made by diagnosticians on the one hand and purely operative surgeons on the other with regard to the possibility of exact diagnosis in the case of abdominal tumors. This disparity, I believe, is due to lack of simultaneously careful study on the part of the two individuals. The purely operative surgeon, as a rule, fails to study his case before hand, and the purely internist fails to follow the case to the operating table,

*Read at the meeting of the Academy of Medicine and Surgery of Richmond, Va., Sept. 8, 1908.

and therefore is unable to corroborate his clinical studies by the anatomic findings. It is futile for any one to claim to be able to exactly diagnose every case of abdominal tumor. This is especially true in those cases seen so early that the physical signs of the tumor have not appeared, and in those seen so late that the tumor has completely filled the abdomen, distorting anatomic relations and becoming complicated by secondary conditions incident to its pernicious effects on structures other than those in which the tumor had its origin. In the case of a colossal tumor in the abdomen a diagnosis of its exact nature and origin is not only unnecessary but is largely a guess. This is certainly true unless the surgeon has had the opportunity to study the case from its beginning or to discover some pathognomonic sign. It is in these cases, however, that the exact pre-operative diagnosis is not demanded and too much time should not be lost in their study.

Most text-books describe elaborately the routine method to be pursued in the study of abdominal tumors and then elaborate on the various subjective and objective signs of tumors of various organs, and it is not my purpose to reiterate them here. Most students, after a mastery of these teachings, approach a diagnosis purely by a process of exclusion. It is pitiful to note examiners approach a difficult case in such an unscientific manner, and the result is apt to be completely negative or completely wrong. Diagnosis by exclusion is approaching the task exactly backward. The proper way to diagnose any affection, and especially such an anatomic lesion as a tumor, is to follow its development, through a painstaking history, taking especially into account subjective functional disturbances, and then to make a systematic and complete examination, and finally to study and re-study the case on these data as a basis for logical deductions. It is essential that one should exercise self-restraint in the process or he will be liable to jump at conclusions, and when he finds himself wrong will lose faith in his own as well as every one's ability. Patients generally consult a doctor for functional disturbances rather than for the swelling. Every case presenting itself for treatment for any symptom referable to intra-abdominal structures demands a painstaking physiologic study and physical examination. There are in all cases of real lesion (in contradistinction to hysterical affection) always some alteration of function referable to the structure involved.

There are located within the abdomen a digestive tract, a biliary apparatus, an abdominal salivary gland (pancreas), a

urinary apparatus, a blood making organ, and in women a genital apparatus. Lesions in any of these structures are just as sure to produce physiologic disturbances as they are anatomic lesions. In addition to these the omentum and its functions must be borne in mind and it should be remembered that certain embryonic structures may persist. It is in these that there is little subjective disturbance and in which diagnosis must be based purely on anatomic findings. When therefore a tumor involves the digestive tract there will surely be digestive symptoms. When it involves the biliary apparatus there will certainly be some alteration of function of the liver or bile tract. When the urinary system is involved there is at some stage of the evolution of the tumor, alteration of the function of urination or abnormal structures found in the urine. When the spleen is involved there are practically always functional and anatomic alterations to be found in the blood. Involvement of the genital organs is bound to produce at some stage, and generally throughout their course, disturbances in menstruation as well as symptoms referable to the collateral catarrhal condition in these organs. It would be better to discover these alterations of function by carefully questioning the patient while obtaining the history, and when this is done to proceed with the detailed physical examination.

Given, therefore, a case of abdominal tumor for diagnosis some systematic plan should be followed. After a casual examination a painstaking interrogation should be conducted with a view to eliciting a correct history.

Gastro-intestinal symptoms must in every case be noted, and when gastro-intestinal catarrh, either acute or chronic, exists, it is at once suggestive that the lesion is located in some part of this tube or in its accessory structures, the liver, bile tract, or pancreas. When there is progression in the severity of the gastro-enteric signs this suspicion becomes almost a certainty. To be sure many patients suffer indigestion entirely independently of any tumor, and therefore it becomes necessary to weigh the case carefully to detect the relation between the evolution of the tumor and the gastro-enteric signs. For example, an obvious tumor in the epigastrium attended by paroxysms of copious vomiting of stagnant stomach contents or blood occurring in a person of cancerous age and attended by signs of pyloric stenosis points positively to cancer of the pylorus. Similarly, a mass in the left hypochondrium found in a patient in whom a history of alternating diarrhea and obstinate constipation with excessive mucous and blood in the stools, suggests strongly

tumor of the sigmoid flexure. When there is a history of recurrent attacks of intestinal colic resembling those of obstruction, either complete or partial, and with this there are the signs of dilatation or thickening of the colon above the sigmoid, sigmoidoscopic examination will make the diagnosis positive. In a case, however, of persistent progressive gastro-enteric signs without evidence of obstruction at the pylorus or in other portions of this tube but with a history of jaundice or of bile in the urine and the tumor is discovered in the region of the liver or bile tract a diagnosis of a lesion in this structure or in the pancreas is almost sure. On the other hand a patient showing a distinct mass under the left costal arch without gastro-enteric catarrh, or with such a trivial degree of these symptoms as to be entirely of secondary importance to the mass itself, calls at once for examination of the urine and blood to differentiate between splenic tumor and a lesion of the kidney.

In women tumors of the pelvic organs are common and when small or of moderate size can be positively diagnosed. There are invariably conspicuous alterations in the menstrual function and two direct avenues for examination, namely, abdominal and vaginal. Every abdominal tumor in a woman of child bearing age calls for a study of the history and a physical examination to detect or exclude pregnancy. When there are signs of pregnancy present or recent, when the mass is located on the side of the uterus instead of involving this organ, ectopic gestation will be indicated by the symptom complex of salpingitis, namely, pain, bleeding and vaginal discharge. A similar mass without the signs of pregnancy points to tubo-ovarian disease, generally inflammatory in nature. Again, such a mass without the signs of active inflammatory disease and without evidence of pregnancy or tumor of the sigmoid suggests ovarian tumor, and if such a tumor is freely movable and not attached to the uterus a clear cut diagnosis of ovarian lesion is justifiable. A nodular tumor centrally located and having lateral movement is nearly always fibroid. Such patients have generally been the victim for a long time of dysmenorrhea, leucorrhea and menorrhagia.

The collateral symptoms of tumor referable to the urinary organs include a history of alteration of the function of urination with or without ureteral colic and the detection of blood and pus and other abnormal substances in the urine.

Tumors of the omentum are exceedingly rare, and producing as they do symptoms almost entirely referable to the digestive

system are generally diagnosed as arising from this tube.

Every centrally located tumor of the pelvis in either man or woman should be suspected of being a distended bladder until it is proven otherwise by a catheter. In old men, the victims of prostatic obstruction, this should always be suspected. The history or even the existence of incontinence of urine does not exclude distention as a cause. The introduction of a long soft rubber catheter will at once evacuate such a tumor.

In conducting a physical examination the purposes are to determine what structure is involved, the nature of the swelling and its general physical characteristics. In all cases it is useful to study a tumor according to its development and its clinical course.

For diagnostic purposes there have been many classifications made of abdominal tumors and any of these may be adopted. For my own purpose I do not confine myself to any one classification, but in a general way the following has proven fairly satisfactory.

1. According to development:
Congenital, sudden, rapid, slow.
2. According to clinical course:
Progressive, steady, persistent, intermittent, recurrent.
3. According to location:
General, local, superficial, deep.
4. According to structure involved:
Abdominal wall.
Umbilicus.
Peritoneum and preperitoneal tissues.
Mesentery, omentum.
Intraperitoneal organs.
Retroperitoneal structures.
Intraperitoneal structures.
Combined locations.
5. According to physical characteristics.
Solid, fluid, gaseous, mixed.
6. According to structure.
Hypertrophy, distention, inflammatory, neoplastic, (a) benign, (b) malignant.

All intra-abdominal growths may be classified into two great groups, namely, (1) Those unattended by signs of inflammation, (2) Those with either local or constitutional signs of inflammation or both.

I realize that this paper is limited only to the discussion of intra-abdominal lesions, but there are certain signs which distinguish all tumors within the peritoneal cavity from those of the abdominal wall and from transperitoneal tumors.

Briefly then a *swelling limited to the abdominal wall* presents the following characteristics:

There are no symptoms referable to internal organs except perhaps a coincidence,

then such symptoms show no relation to the evolution of the swelling.

Mobility with respiration or independently of respiration is with the structures of the abdominal wall and independent of mobility of the diaphragm, i.e., out and in and laterally, not up and down.

Contraction of the abdominal muscles while rising in bed, with the arms folded, causes no flattening nor disappearance of swelling and may accentuate it.

Palpation notes superficial location and mobility over or with abdominal muscles.

Dullness is always elicited, deep tympany may be muffled.

In all general enlargements of the abdominal wall the umbilicus is depressed.

Cutaneous and subcutaneous swelling is not limited to the abdomen, though it may be greatest there. It generally involves also the upper thighs, back, and lower thorax.

All swellings below the deep layer of superficial fascia are limited below by the attachment of the latter to the fascia lata just beyond Poupart's ligament, and in the mid line by attachment to deep structures.

Sub-aponeurotic Swellings.—These are limited by the semilunar lines, costal margin, Poupart's ligament iliac crest and edge of erector spinæ. They are generally unilateral and caused by hemorrhage, inflammation or emphysema. Such a tumor may be resonant or tympanitic to percussion, but is not movable beneath the muscular wall.

Irregular muscular contractions usually occur in the lower mid abdomen. Such a mass is usually non-tender, its surface even, non-movable beneath the muscles, cannot be felt in the pelvis, is generally seen in hysterical females (so-called "phantom tumor") and always disappears under anaesthesia to recur afterward. It may persist for months and is often associated with irregular erratic symptoms referred to abdominal organs. It need not be mistaken for pregnancy, ovarian cyst or any other abdominal tumor.

Tumors arising beneath the abdominal wall.—These may pass through the abdominal parietes or may remain within the abdominal cavity. In cases of the latter, contraction of the abdominal muscles always causes the swelling to become less conspicuous, flattened, or even to disappear from sight and touch. This test may be applied by directing the patient to rise in bed with arms folded, cough or to contract the abdominal muscles either voluntarily or reflexly upon application of the cold hand of the examiner. Persistent rigidity of the abdominal muscles from peritonitis and other causes may necessitate general anaesthesia to discover such a tumor, crying in

children will generally cause the tumor to escape observation.

The chief features of *transparietal tumors* are as follows:

With few exceptions no swelling passing from within through the abdominal wall is made less conspicuous by contraction of abdominal muscles. They are often made more prominent by the applied test and crying of children. The intra-abdominal portion of a malignant adherent tumor or an abscess may be rendered less conspicuous and thus effect the general size or shape of the swelling but the extra muscular portion, when such is present, is generally made at least relatively more conspicuous by such a test. In cases of cysts of the omphalo-mesenteric duct or urachus, if occlusion has completely occurred at the umbilical end, the swelling is wholly intra-abdominal and possesses the characteristics of such tumors. Most transparietal swellings can be reduced wholly or in part by proper manipulation during muscular relaxation, aided by gravity. If such reduction is accompanied by gurgle the tumor is gut.

Intra abdominal Tumors.—All these are rendered inconspicuous, flattened and difficult to locate upon contraction of the muscles, thick abdominal walls, gaseous or faecal distention of the bowel, and by gas or fluid in the peritoneal cavity.

They may be classified as

A. Swellings without accompanying signs of inflammation.

B. Swellings with such signs, either local, constitutional, or both.

Any swelling involving either the parietal or visceral layer of the peritoneum or the omentum, either primarily or secondarily, may as the result of adhesions present the signs of a congested membrane later becoming thickened and adherent, i.e., a traumatic peritonitis, but unless infection is present, does not cause true inflammation.

Inflammation of the tumor itself without involvement of the peritoneum is accompanied by different signs than those of peritonitis and may be distinguished.

Non-inflammatory swellings may subsequently become inflamed. The structure in which they are located is predisposed to infection as a result of impaired function or mechanical disturbance.

Non-inflammatory general abdominal swelling.—Gaseous tumors are everywhere tympanitic; if distension is extreme the muscular wall may be tense but not truly rigid. The transverse lines between the bellies of recti are not distinct.

Gastro-intestinal distention.—Atonic distention is caused by: rickets, spinal paralysis, muscular paresis from over distention as in

chronic constipation, gastro-enteritis with fermentation.

Mechanical distention is caused by any obstruction of the digestive tract or by local tumors.

With gastro-intestinal distention there is always tympany and generally belching and passage per rectum of flatus. If distention is extreme, peristalsis may be arrested and flatus not passed. There is always impairment of gastro-intestinal function. Tension of the parietes is distinctly less than in pneumo-peritoneum. In cases of mechanical obstruction the tension may be extreme. Adynamic distention from peritonitis is accompanied by the signs of peritoneal inflammation.

Pneumo-peritoneum.—This is caused by rupture of a hollow air containing viscus. There is profound collapse and rapid peritonitis, preceded by a history of some cause. Liver and splenic dullness anteriorly are obliterated, or nearly so. These areas of dullness are elevated or lessened by gastro-intestinal distention, but not obliterated.

Free fluid in the peritoneal cavity.—Causes:—Ascites; blood from the rupture of a solid viscus, aneurism or the open end of a smaller blood vessel; ectopic pregnancy; urine from ruptured bladder; contents of ruptured cysts, particularly ovarian.

In all cases there is with the patient on the back less anterior swelling than in the flanks; dependent dullness and superincumbent tympany, movable in location, dependent upon change of patient's position. When fluid is large in amount fluctuation is noted. When distention is prolonged linea albicantes are produced.

Ascites is generally due to portal obstruction, but may be caused by tuberculous peritonitis or by solid tumors, especially of the ovary. The history and signs of such are to be sought. There is gradual onset of symptoms, often the superficial veins are prominent; caput medusae and protrusion of umbilicus are noted when due to portal obstruction. When tuberculous disease of the peritoneum is the cause there are generally signs of low grade inflammation.

Rupture of any blood or fluid containing viscus is accompanied by immediate profound collapse. There is a history of signs referable to the particular organ, often trauma. When caused by rupture of an aneurism the history of this may be elicited and when from any cause the constitutional signs of internal hemorrhage are present.

In case of rupture of an ovarian cyst a feeling of something giving away is noted, the local tumor disappears, immediate collapse and soon peritonitis are observed.

Solid growths or cysts may finally fill practically the whole abdomen. In early

stages they are localized.

Pelvic non-inflammatory tumors include the following:

Distended bladder.

Distended uterus.

Pregnancy—after fifth month fluctuates.

Retained menses.

Enlarged uterus.

Chronic metritis.

Subinvolution.

Hypertrophy.

Uterine tumors.

Myoma, carcinoma, rarely sarcoma.

Distended tubes.

Hydrosalpinx.

Ectopic pregnancy.

Haematocele and cysts of broad ligament.

Ovarian cysts and tumors.

Tumor of retained testicle.

Tumor of pelvic bones and joints.

Osteoma, coondroma, sarcoma of ilium and sacrum.

Tumor of pelvic lymph glands, generally sarcoma or carcinoma.

Cancer of the sigmoid.

Impacted feces in sigmoid.

Aneurism of iliac artery.

Tumors of the upper abdomen may be enumerated as follows:

Central:—Tumor of the left lobe of the liver.

Dilatation of stomach—may fill whole abdomen.

Cirrhosis of stomach, hypertrophy of pylorus or transverse colon.

Cancer or colloid of:

Stomach, pancreas, peritoneum, omentum, intestine, transverse colon.

Sarcoma or enlarged mesenteric omental or lumbar glands, omental cysts.

Local distention of intestine from volvulus or bands.

Fatty tumor of omentum.

Abdominal aneurism.

Osteoma or chondroma of spine.

Pregnant uterus.

Distended bladder.

Floating kidney or spleen, rarely liver.

All tumors may become central when large enough.

Lateral.

Right side:—Floating or downward luxation of liver.

Hypertrophic cirrhosis or amyloid disease of liver.

Tumors or cysts of liver or gall bladder.

Tumor of caecum.

Left side:—Enlarged spleen, floating spleen.

Splenic tumors and cysts.

Tumors of splenic flexure or sigmoid.

Either side:—Floating kidney.

Tumor, cyst or distention of kidney.

Hypernephroma, perirenal lipoma.

Distended colon (ascending right, descending left).

Aneurism, renal, iliac.

Tumor of retained testicle.

Encysted collection of free fluid may occur in any location and are difficult to recognize.

Distended bladder may be pushed away from median line.

B. Tumors with either local or constitutional signs of inflammation, or both.

(1) General.

General suppurative peritonitis. The symptoms of this need not be enumerated.

Tuberculous peritonitis. This is not true peritonitis but simulates it. There is rapid onset, all local symptoms are less severe and more prolonged, there are signs of tuberculosis elsewhere. There is conspicuous ascites and relatively inconspicuous shock. It is often secondary to tuberculous enteritis or salpingitis.

(2) Local.

The most urgent of these is abscess or inflammation in any structure or of any already existing tumor. These are most commonly appendiceal and pelvic in origin.

Until peritonitis supervenes the pain, tenderness, etc., are deep-seated, rigidity is less marked and may be absent. Until obscured by peritonitis symptoms referable to the organ involved are prominent and in most cases constitutional symptoms (hectic, etc.,) are marked.

When inflammation extends to the peritoneal covering, board like rigidity often obscures or renders difficult examination of the tumor. Auscultation should note a friction sound at first, and weakened or lost peristalsis. Later, adhesions and pus develop.

Diagnosis of location of tumor.—Smooth, even enlargements point to general enlargement of a solid viscus, to distention, either fluid or gaseous of a hollow one, or to a unilocular cyst, or large abscess. In case of distention with both air and fluid splashing may be elicited. Solid enlargements and gaseous distention do not fluctuate. The former are dull to percussion unless overlaid by stomach or intestine, the latter tympanitic.

The pregnant uterus after the fifth month is a fluid containing viscus, before that fluctuation is not elicited.

In a gall bladder distended with tenacious viscid bile and mucous, and in certain ovarian cysts, fluctuation may not be detected. Unless certain precautions are applied when making the test, particularly in patients with thick, rigid abdominal walls, the test may be misleading. Multilocular ovarian cysts may not show the sign. In the case

of abscess deeply located the test is useless. Free fluid in large amount always fluctuates as does also a distended bladder, unless almost to the point of rupture.

Nearly all intra-peritoneal tumors move downward with inspiration, upward with expiration. This is most marked in those in relation with the diaphragm, enlarged liver or spleen or tumors of these organs, but is also noted in tumors having a lateral attachment in the pelvis; as ovarian tumors, tumors of retained abdominal testicles. Dense adhesions may interfere with mobility and when located at the caecum or in the vertical portion of the colon this sign is of little use and may be absent.

Tumors of deep seated fixed location (duodenal) show little or no mobility. In case of a mass, particularly a small one of the omentum or small intestine, the downward pushing effect of the diaphragm may be lost before the tumor is affected.

Audible and visible peristaltic movement is confined to the distended thick-walled stomach and intestines.

Tumors of infra-peritoneal origin are little, if any, affected by movements of quiet respiration. In case of distended bladder, enlarged and distended uterus, this sign is generally absent. With solid tumors of infra-peritoneal origin respiratory mobility is not to be expected.

Mobility upon palpation occurs in all pedunculated tumors, and always in an arch, the centre of which is the pedicle attachment.

Gall bladder swellings are attached to the liver, renal cysts to the kidney. Floating kidney had for its pedicle the ureter. The uterus and bladder are fixed below in the median line. The pedicle of the small intestine is the attachment of the mesentery to the spine; gastric swellings being held by the oesophagus and lesser omentum, move freely from side to side and upward. The range of mobility of tumors of the ascending and descending colon is greatest laterally, and even in this direction limited. Tumors of the transverse colon and mesentery move in all directions. In case of wandering liver, kidney and spleen the normal location of these organs is vacant or filled with intestines, while the notched spleen, broad heavy liver or reniform kidney with, perhaps, the renal artery, can be felt in an abnormal position. The pedicle of an ovarian cyst is in the lateral portion of the pelvis. Any pedunculated tumor may give symptoms of torsion.

The immobile tumors include abdominal and iliac aneurism, sarcoma of retro-peritoneal glands and all sessile growths in relation with fixed structures. Dense adhesions surrounding any tumor cause fixation.

Brisk purgation often removes intestinal concretions and impacted feces, while tumors of the walls of intestine are made recognizable. Impassable obstruction from volvulus or bands is rendered worse and the test may result in rupture of bowel.

Gastric and colonic distention may establish the relation of tumors to the stomach and bowels. Points of complete obstruction limit distention, masses in the wall of the gut make this obscure, retro-peritoneal growths become covered with tympany.

With the patient in the Trendelenburg posture a line of tympany will be noted at the lower limit of the intestines. This is pushed downward by growths from above and upward by growths from below. In the case of large ovarian or other large lateral pelvic tumors tympany is pushed up and to the opposite side. Dullness is uninterrupted from the point of origin of growth.

Pelvic examination will generally determine such origin of tumors. Proctoscopic examination is demanded when signs point to the bowel.

I repeat that alterations of function point generally to the organ involved. Urinary symptoms with haematuria, pyuria, etc., point to the kidney. Jaundice and biluria to liver and gall bladder. Portal obstruction is shown by ascites with caput medusae. Menstrual disturbances and vaginal discharge suggest pelvic disease, though alone are never reliable. Gastro-intestinal symptoms favor the thought of stomach and intestinal disease, though they may occur with any abdominal affection. Excessive fat and meat in the stools and glycosuria suggest pancreatic disease, though too much reliance must not be placed in these signs. The recent so-called pancreatic tests of the urine are promising but not positive signs of pancreatic disease.

Nature of the tumor.—The signs of pregnancy should be sought in most cases of abdominal tumors in women.

The catheter will generally evacuate a distended bladder, though it may fail in case of constriction from the presence of such a cyst in a hernial sac or stricture or elongation of urethra. In case of elongation of the urethra from adhesions, enlarged prostate and a retroverted gravid uterus a long rubber instrument and care are required. General anaesthesia invariably causes the disappearance of phantom tumor. Bony and cartilaginous tumors are shown in a skiagraph.

Free blood is accompanied by signs of internal hemorrhages. Abscesses and inflammation are characterized by local and constitutional signs of inflammation. Solid growths of irregular contour and of moder-

ate density are characteristic of sarcoma and carcinoma. Osteoma and chondroma are extremely hard. Gall stones may sometimes be felt as nodules. Sarcoma is often associated with dilated and tortuous veins on the skin. Pouting umbilicus is characteristic of ascites and late pregnancy; with earlier pregnancy and large ovarian cysts the navel may be level with the abdominal wall; with adherent ovarian cysts it is often retracted or pulled out of normal position. Any cystic swelling having an exit for fluid may be intermittent and recurrent. Hydro-nephrosis, pyonephrosis, hydro- and pyosalpinx and occasionally the gall bladder constitute the intermittent tumors. In all cases of doubtful tumor of the loin ureteral catheterization should be employed. Aneurism gives an expansile pulsation bruit and thrill and is always associated with arteriosclerosis. Pressure on the vessel above affects its size. Aneurism must not be confused with an abscess in contact with an artery.

Sarcoma and congenital cysts of the kidney and enlarged mesenteric glands are common in children. Carcinoma with great cachexia is found with great rarity before the age of forty. Tuberculous disease occurs in young adults and children. Gumma is confined to syphilitics. Amyloid disease of the liver and kidney occurs late in patients affected with chronic suppurative processes. Cirrhosis of the liver occurs mostly in alcoholics, but is not confined to them. Benign tumors may occur in any one. They are of slow growth, small and cause few symptoms.

Hydatid disease is rare in United States, though it is occasionally found in the liver in people who have fondled dogs. It is of slow growth, rarely fluctuates and hydatid fremitus may be detected.

Great splenic enlargement with severe anaemia and lymphatic disease point to Banti's disease; when there is a preceding history of chronic malaria it is ague cake.

Sub-phrenic abscess is retro-peritoneal, difficult to distinguish from pneumothorax hectic is severe, oedema posteriorly is common. This may necessitate exploratory puncture for its recognition. History of a cause is valuable.

Pancreatic cysts, fluid collections in the lesser peritoneal cavity and encysted collections anywhere are difficult to recognize.

Tumors of the adrenal gland are distinguishable from those of the kidney. Sometimes the signs of Addison's disease may be noted, and premature growth of hair, particularly in the pubic region, with hypertrophy of the genitalia are valuable differential signs. On account of the well known tendency of these tumors to metastasize to

bones every case of bone tumor calls for careful examination for the signs of hypernephroma.

219 E. Grace St.

Clinical Observations on Pellagra in Chester County, S. C.†

By H. E. McConnell, M. D., Chester, S. C.

Mr. President and Gentlemen:

Some four years ago or more in my work as a general practitioner, my attention was called to a peculiar condition or disease among some of my patients in a mill village near town. The first symptom I was usually called to prescribe for was a sore mouth, and indigestion with usually looseness of the bowels, this would usually be in the early spring and as the weather would get warmer a peculiar red and rough erythematous eruption would appear on the back of the hands. I looked upon the disease at this time as a severe form of stomatitis, and at times when the tongue and gums would bleed, thought of scurvy, especially as at that time of the year fresh vegetables were scarce and the mill folks were eating large quantities of canned goods. But the clinical picture did not quite fit for a diagnosis of scurvy. Well do I remember getting down all my text books, and trying to fit a diagnosis to the disease, but very little could I find in text books. Finally, in my reading, I came across an extract in the Medical News, quoted from a French medical journal, giving a description of Pellagra. I realized at once that this was the disease with which my patients were afflicted. I had two patients to die with the disease in 1904, both females over forty years of age. If the claim to priority in the recognition of the disease in this State is of any significance I am certain that I diagnosed the disease as early as 1904 but unfortunately did not report my cases, though I called the attention of my doctor friends to the disease. In the last three years I have had eight cases under observation, five females and three males, all over thirty years of age. Of this eight, four are dead and four are still under observation. Of this four, one is apparently well, one now in this institution very ill, the other two are men at work, apparently well, one on the farm and one a clerk in the County Dispensary, who says that he is well and that he cured himself by drinking good corn whiskey and plenty of it. In the ten cases observed, seven were females and all are now dead. All the men are still living, so it is evident that men withstand the disease better than women;

and that women are more prone to the disease than men. As to the cardinal symptoms of the disease, salivation, skin eruption, and mental disturbance, I mention them in the order that they seem to occur to me. Instead of a tropho-neurotic disease, I would most certainly call it a gastro-intestinal disease, as I am confident that the stomach and small intestines are the parts of the body first involved, and that the trophic and neurotic symptoms and skin eruption are produced by the absorption of the toxine from the gastro-intestinal mucosa. If we are to accept the theory that the disease is contracted from eating spoiled or fermented corn products, we must also accept the theory that it is a toxine, an extractive or fatty oil, as suggested by Lombroso, and that it is unaffected by heat as all corn products are cooked well before eaten. One of my patients whom you will see today took sick in the spring of 1907, I was called to see her at the time and found her suffering with a sore mouth, tongue fiery red and pointed, denuded of epithelium, buccal mucosa, very red, burning sensation in the stomach and a profuse diarrhea. I did not at this time recognize hers as a case of Pellagra. I treated her for stomatitis and diarrhea. During all this time she showed no special nervous symptoms except she was weak and discouraged as to her condition. During this time she was nursing a baby. In the fall and winter she improved and was able to do her housework, and not until the spring of 1908 when I was called again to see her for her sore mouth did I realize that she had Pellagra. Then I found a red erythematous rash on the backs of her hands, going up no higher at first than the cuff. This erythematous eruption is the most constant and diagnostic sign of Pellagra. They all have it, or at least all my cases have had it. The eruption is similar in all cases, only varies in intensity. It needs to be seen only once to be recognized, and if you ever shake hands with one of these patients you never forget the sensation. The skin of the hand is dead, hard and rough. The eruption appears first on the hands, then on the forehead sides of the neck and in the later stages on the elbows and dorsal surfaces of the feet. The neurotic symptoms are the last to appear, and continually grow worse as you will see in this case today. Usually the first thing complained of is inability to sleep, pain in back and back of neck, general muscular weakness and staggering gait, and marked depression. These patients most always have a frown on their foreheads, are irritable and melancholia, seldom ever smile; patella reflex exaggerated, eye sight gets

†Read before the Pellagra Conference, Columbia, S. C., November 26, 1908.

bad, pupils most always equal. Most all of them have double vision; and towards the end sink into a melancholia condition, and die from exhaustion after having chronic convulsions a day or so before death takes place, although one of my patients was acutely manical a week before her death. Though I have had six cases to die, as yet I have never made any autopsies, neither have I done any microscopical examinations of blood or feces, though I have made chemical analyses of the urine and found nothing abnormal. I am so confident that the poison first spends its energies on the stomach and small intestines that if we could make our diagnoses earlier and give treatment directly to these organs, we could expect a larger number of cures. Therefore I shall expect some of my colleagues who are making a specialty of stomach analyses to help us to make an earlier and more definite diagnosis and suggest a specific cure if possible. I have one patient to present as cured, the oldest of all the ten cases, 68 years old. He has had the disease for three years, and during the summer of 1907, was so weak that he was often confined to his bed for two or three weeks at a time. The treatment of his case was with Fl. Ext. Hydrastis, 15 gts., before meals, and ten gts., nitro-muratic acid dil., after meals, with plenty of milk, eggs and vegetable broth, and by the use of the luodescent light treatment, applied over the region of the stomach until the skin was reddened. This man has been perfectly well all this summer, and has spent most of his time working his garden in the sunshine, yet there has been no return of the sore mouth, eruption on hands, or diarrhea. If the disease is due to eating bread, etc., made from musty meal, then we must see to it that our "Johnny cakes and muffins" are made from meal like the kind our fathers were raised on. Meal from good sound corn that stood in the field until frost, after the fodder had been pulled, and was thoroughly dry when harvested, and selected in the crib, the best corn being saved for meal, the rest being fed to the stock. I believe that the western plan of harvesting corn that is fast being adopted in the South, that is of cutting and shocking the corn when the fodder is ripe and the grain still soft may have something to do with the development of the fungus that produces the disease. For in the center of one of these shocks of corn with its heat and moisture, would be a splendid place for the development of any fungus growth. If we have to ship corn from the west, let us ship it in the ear, then we can more readily tell when it is sound.

Before closing my paper, I would like to

ask for the Pellagrous patients that such terms as "dreadful, and leprous," as applied to the disease in the newspapers be left off, as many of these patients read the newspapers, and it has a very depressing effect upon them. I wish also before closing, to especially thank Dr. Babcock for his kindness in spending a day with me the past summer, and verifying the diagnoses in the six cases I had to show him.

Surgical Tuberculosis, With Especial Reference to the Use of Tuberculin in Diagnosis and Treatment.†

By R. Tunstall Taylor, B. A., M. D., Baltimore, Md., Surgeon in Charge, Hospital for Crippled and Deformed Children; Clinical Professor of Orthopedic Surgery, University of Maryland, etc.

Between fifty and seventy-five percent. of the surgical cases seen in children present tubercular bone or joint lesions and it especially, therefore, behooves us to go very particularly into detail in perfecting our technique in the diagnosis and treatment of these conditions. Should the diagnosis not be made early and should the treatment not be thorough, what a responsibility rests upon us for the resulting deformity, not to say life, of the little patient by neglect.

Every one is familiar with the shocking deformity, alike painful to the observer and patient, of tubercular osteitis of the spine, commonly called Pott's disease; or the distorted knees or atrophied, flexed and adducted legs of tubercular hip disease with the crutches and high soled shoes these cases must wear through life from neglect. What ravages the disease more advanced, makes in sapping the vitality when fistulous tracts make their way from the primary bone lesion to the exterior, and secondary infections result from the staphylococcus aureus and albus, streptococcus, bacillus pyocyaneus and coli communis, to name the commoner varieties. We then note the hectic fever, and if of long duration, the amyloid viscera with ascites, albuminous urine, general military tuberculosis or meningitis and death.

Therefore, I say we must practice preventive medicine whereby we can, not only in a very large percentage of cases, prevent these untoward results, but actually restore them to full bodily function and health. Early diagnosis and efficient treatment must be our watchwords.

During the past decade two means of diagnosis in bone and joint lesions have been added to clinical observations, which virtually make the diagnosis unerring,

† Read before the Richmond Academy of Medicine and Surgery, November 10, 1908.

namely, the x-ray photograph or skiagram and the various tuberculin tests.

X-Ray Diagnosis.—I use the term skiagram advisedly because I find that far too many physicians feel they have discharged their duty to their patients if they have looked at the suspected part with a fluoroscope; whereas, in reality, I do not believe any one can recognize either the presence or absence of early bone tuberculosis by that means. In order to properly study a skiagram the observer must be thoroughly familiar with the normal appearance of the part at *that* age, for we know that the epiphyses in very young children are exceedingly small and immature, and in established disease there is such clouding shown by the x-ray in the epiphyseal region that there is some similarity in appearance.

As often emphasized by radiologists in regard to the limbs, similar radiographs of the two sides; i. e., the normal as well as the suspected should be in similar positions with regard to the x-ray tube. Thus, if one thigh is rotated outward and the mate inward, the resulting skiagram will be valueless for accurate comparison.

One of the first changes noted by the x-rays in bone tuberculosis is the obscuration of the sharp, definite outline of the bone, so that the epiphysis may be actually invisible; more or less rarefaction occurs at the seat of the lesion, so that a spot of tubercular absorption is soon manifest. This we do not see in other osteoarthritis. Atrophy, both epiphyseal and diaphyseal, is early apparent, although in some instances there is a temporary hypertrophy of the epiphyses especially noticeable in the knee. Later, of course, there is the rat-eaten, gnawed appearance in the bone. There is not the elevation of the periosteum which we see in syphilis, scurvy, periostitis and osteomyelitis. In osteosarcoma, there is a spongy appearance and bone hypertrophy. There is no attempt at repair, with the formation of involucrem and the throwing off of sequestra. In the spine, one sees the apparent fusion of adjacent vertebral bodies with the obliteration of the intervening intervertebral discs. Thus, after a little study and careful examination, a case of bone tuberculosis can be recognized.

In my opinion, the x-ray is by all odds the most important and accurate means of making a diagnosis in bone or joint disease as it definitely locates the lesion, which tuberculin does not. This, I emphasized in a paper some years ago (1). The x-ray plate can be in hand, ready for examination, in an hour. In cases presenting any question, tuberculin should be used in addition.

Tuberculin Diagnosis.—Many of us for years have been opposed to the subcutaneous injection of large doses (from one to five milligrams) of the original tuberculin in cases of suspected joint disease in children for the reason that it made a sick child sicker with the temperature reaction, nausea, diffuse pain, etc., focal reaction at times and local reaction at the point of injection. Then, in the absence of the focal reaction, (often absent with moderate doses) at the seat of disease, what did this tell us? Did it show us, if a positive reaction occurred, that there was not a mediastinal or bronchial lymph gland or mesenteric gland that was caseous; or that there was a tubercular tarsus as distinguished from a focus in the lower epiphysis of the tibia? (2). Several days must be consumed in the endeavor to make a diagnosis by this method with the aid of the study of the two-hour temperature chart.

To those of us opposed to the subcutaneous injection of the larger doses of tuberculin, the careful study of Wright's opsonic indices in these children added another reason for discarding it, viz., the sustained "negative phase" often seen after comparatively small doses of tuberculin given therapeutically. Thus, in a series of twenty cases in which the blood was examined by the opsonic index tri-weekly over a period of six months by us at the Hospital for Crippled Children in Baltimore, we found that even so small a dose as 1-200 mgm. of T. R. would give a prolonged negative phase without other apparent constitutional symptoms, and this was not an isolated case, but in all and invariable; but it did not occur if the dose was between 1-500 and 1-1000 mgm. (3)

If the opsonic index means anything and is even an approximate index of the degree of resistance or immunity shown by the patient, certainly we ought not to use any means of diagnosis that will for a prolonged period retard this acquisition of greater resistance or establishment of immunity. We must realize we are not solely nor even especially trying to cure the patient of the local disease, but of the general tubercularized state. Fortunately, within the past year, two other means of tuberculin diagnosis have been presented to the profession, viz., the Wolff-Eisner-Calmette conjunctival reaction and Von Pirquet's cutaneous or percutaneous reaction which are familiar to you all (4, 5 and 6).

It may be of interest to summarize our results with these two methods on fifty consecutive cases with one method, and then a second fifty cases with the other method, all admitted to my service within the past

eight or nine months. These observations have been published in full elsewhere. (7).

Briefly, with Calmette's conjunctival reaction, the so-called ophthalmo-tuberculin test, in 50 cases, 35 were suspected clinically and by the x-ray of having tuberculosis and all reacted. The 15 cases which were not thought tuberculous did not, thus confirming the tentative diagnosis. Five of the positive cases had marked reaction; four had severe reactions, and one had a very bad corneal ulcer which persisted two months, causing us much anxiety for the child's vision which, happily, was not impaired. Thus, from our experience, corneal ulcer is to be feared in two percent of these tests.

A 1% solution of Calmette's alcoholic precipitated tuberculin was used in four-fifths of these cases, but we found a .5% solution just as efficacious and safer, but smaller dilutions gave no results.

The possible danger renders one more or less apprehensive of this method.

Skin Reaction.—Fortunately for surgery in children, the skin reaction is an extremely reliable test, while in older people nearly every one, in cities at least, has been more or less exposed to tuberculosis somewhere. The skin test shows that approximately 60 per cent. of all older cases give a positive reaction. In children this is not the case.

In our series of 50 children examined by this method, 12 were not thought to have tuberculosis lesions, but 4 of these reacted; one showing a marked reaction was an orphan asylum child, age 15, with infantile paralysis. She had evidently a focus somewhere in her body unrecognized.

Of the 36 suspected cases, 3 did not react—2 of coxalgia and 1 healed tubercular tarsus. This gave an error of little over 7 per cent. 5 per cent., 10 per cent., and 20 per cent. solutions were used in these failures, and perhaps if stronger solutions had been used a positive reaction would have occurred.

Many of our cases react readily to bovine tuberculosis, or as it is known, to Spangler's perluscht or pearl-disease tuberculin (following the lead of Dr. Detre of Budapest); and we are now testing comparatively the reaction to a pure strain of human and bovine tuberculin to determine in each given case which tuberculin to give therapeutically. Parke, Davis & Co. inform me that ordinary veterinary tuberculin is usually made from human strains. It must be understood also, that we are not absolutely agreed that strains from a pulmonary case are human, nor that those from a tuberculous cow are proven to be bovine at the present time. Our cases, thus far react about equally—half give a more marked

reaction to the bovine, and the other half to the human tuberculin, when used synchronously.

With the time at our disposal, it is quite impossible to go very deeply into the treatment of the various bones and joints, but certain underlying principles may be enunciated.

In the first place, we must regard our patient as one who is tubercularized, i. e., as one presenting decreased or lowered resistance to the bacillus tuberculosis, and primarily, we must endeavor to increase the immunity of the individual not only to control the extension of the local manifestation, but to minimize outbreaks elsewhere and to shorten the duration of the local trouble.

The well-known fresh air treatment for pulmonary tuberculosis by means of tent-life, shacks or porch treatment, gives equally valuable results in surgical tuberculosis, and should be insisted upon. Even after a very short period of such treatment improvement will be noted in the color, nutrition, appetite, absence of insomnia and restlessness as well as distinct gain in the local trouble.

We have met this requirement since 1897 at the Hospital for Crippled Children, by having an adjunct Mountain Hospital in the Blue Ridge of western Maryland, where we use tents and shacks and the children live, eat, sleep and are bathed out of doors. Up to this time, this has only been possible from May to October; but the results have been so encouraging that we will extend the period for keeping this branch of our work open for a longer period, if not all the year around.

As a further aid to immunization of the patient, we have used tuberculin T. R. for the past two years, hypodermically, in doses of 1-1000 mgm. once weekly with a distinct satisfaction both in hospital, dispensary and private practice. Restoration of functional use has been apparent in cases even after sinus formation or the aspiration of extensive secondary abscesses which indicated material bone destruction. This mode of treatment in children shortened the duration of the disease and produced repair which, prior to its use, we did not anticipate as an end result. Without observations of progressively increasing the dosage, neither clinically nor by opsonic determination did we feel our results were as good.

Ochsner (8) of Chicago reported at the recent meeting of the International Congress on Tuberculosis, in Washington, an interesting observation in regard to the use of tuberculin. He had a case of bilateral cervical tubercular adenitis. He operated on one side and found it surrounded by a

dense wall of connective tissues. He then began tuberculin treatment, and after some months found, when he operated on the other side, little or no scar tissue, but excessive vascularity, so that every touch of the knife or snip of the scissors produced profuse capillary oozing. He, therefore, advances the theory that tuberculin in proper doses produces not only an increased phagocytosis for the tubercle bacilli themselves in the leucocytes, but a phagocytic activity, as he expressed it, that could "tear down the fortifications of the hostile garrison and enable the attacking leucocytes to storm the enemy's entrenchments." He thus adds another physiological action to the use of tuberculin which the writer has not seen reported by other observers, viz: active hyperæmia.

Local Treatment.—The local treatment of bone and joint tuberculosis may be, from a mechanical standpoint, likened to the treatment of fractures, in that we first wish to overcome muscle spasm and strive for the most thorough immobilization of the part. As an example, take a tubercular knee: The early appearance of muscle spasm in the hamstrings pulling the knee into flexion, must be overcome and, later, thorough fixation obtained by a plaster cast extending from the toe tips to the trochanter. A cast extending a few inches above or below the knee would be manifestly insufficient.

⊕ Traumatism must be avoided in disease of a joint of the lower extremity not only by overcoming the intra-articular pressure incident to muscle spasm by traction at first in bed, but by preventing weight bearing with crutches and elevation of the shoe of the well side.

⊕ Weight bearing in spinal disease must be avoided by recumbency for as long a period as possible during the acute stage, and more or less insisted on during convalescence. In very acute cases, traction must be used on the head and lower extremities. The patient must be flat on the back and fixed in a *hyperextended position* at the point of disease (10). This latter point I first brought to the attention of the profession in 1895, and it is now generally adopted as one of the *most essential principles* to be aimed at in the treatment of Pott's disease both in the recumbent and convalescent ambulatory patient. Attempted fixation of the spine prior to this was largely done, and even to this day is occasionally aimed at by the application of a plaster jacket by the Sayre suspension method. This I have pointed out in a previous paper, does not accomplish hyperextension, and the profession at large should realize that a plaster jacket will not

fix the spine above the 8th dorsal vertebra. For disease above that point the jury mast attached to the jacket is only a poor makeshift which will not save your patient from increase in the deformity.

Fixation in bed in the hyperextended position should be accomplished by the plaster bed or jacket, by pads on a Bradford frame or by a brace properly fitted to produce *hyperextension*.

Bier's Hyperemia.—(11). In disease of the elbow, wrist, knee and ankle, the daily application of the rubber bandage above the joint to produce slight venous stasis or Bier's passive hyperemia we have found very helpful and use it as a routine. We also use his cups over sinuses with the same end in view, by suction to increase the vascularity and phagocytosis.

Beck's Bismuth Paste.—(9). For the past six months we have also used Emil Beck's hot bismuth-vaseline paste to inject all bone sinus cases, and certainly in 50 per cent. we have noted a more rapid healing. As pointed out by Beck the course of the sinus can be clearly demonstrated by an x-ray of the bismuth injected, as Rieder, of Munich, first demonstrated in 1904, the gastric curvatures by the x-rays. One is often amazed at the diverticula of sinus as shown by the x-ray.

Beck states that two reasons are most often responsible for the non-healing of sinuses by his method; first, from not filling the sinus throughout with the paste, or, second, from a sequestrum at the bottom. Whether the hot paste is sufficiently antiseptic to kill the bacteria, or whether it acts as a framework to aid granulation or simply as a mechanical plug to keep out pyogenic bacteria is conjecture.

Secondary Tubercular Abscesses.—However, the best way to cure sinuses is to prevent them. By this I mean that the hardest lesson to teach the profession at large is not to treat a cold abscess like an acute abscess, i. e., by incision and packing. If a tuberculous abscess is opened and packed, infection will surely and invariably take place from the skin cocci in from 24 to 48 hours, no matter what your technique, and your patient, hitherto running a temperature of from 99 to 100 deg., will immediately start a hectic chart of from 102 deg. to 105 deg. with a sinus resulting for months and, possibly amyloid disease and death. I have never known a more fertile culture medium for cocci than the tubercular sinus. It is the secondarily infected sinus that drains away the life of your tuberculous bone case, not the primary disease.

The proper treatment, if a cold abscess must be opened, is to make a small incision

and suture immediately after evacuation with firm compresses and bandage. Subcutaneous silver wire suturing is the best.

Abscess or non-abscess depends upon the thoroughness of your treatment of the bone focus, perhaps far away. The incising and leaving open of a secondary psoas abscess we will say, surely does no good to the primary focus in the spine, far above.

Operative Treatment.—The erosion or excision of joints in children should be done with the greatest hesitation and only in the most serious cases, for any removal of the epiphyses must impair the growth of the limb in length, so that when adult life is reached there is a pitiful shortening of the member. Of course, as pointed out by the writer in another paper, if pain, night cries and muscle spasm do not yield to thorough traction and fixation after several months trial, and if the x-rays show a progressive extension of the disease or a sequestrum, operative interference must be resorted to. In adults, however, operation for the removal of the diseased focus, except in spinal tuberculosis, is the treatment of choice as the promptest method of attaining a cure.

To Summarize:

1. The x-ray is by all odds the best aid to the clinical diagnosis of tubercular bone disease.

2. The subcutaneous injection of large doses of tuberculin (one to five milligrams) in children, is to be condemned for diagnosis as unnecessary with the other means at our disposal, because harmful and possibly dangerous. Syphilis and leprosy also respond to these large doses.

3. Conjunctival or ophthalmotuberculin may cause corneal ulcers and serious eye inflammation in 2 per cent. of the cases and is, therefore, not to be used from choice.

4. The Von Pirquet skin reaction is quite reliable, safe and valuable, especially in conjunction with the clinical symptoms and the x-ray in children.

5. Tuberculin T. R. in doses of 1-1000 mgm. and the fresh air treatment should be used as a routine in all tubercular bone and joint cases in an endeavor to immunize the patient.

6. Thorough fixation, traction in all acute cases, and in the spine, hyperextension in addition, are of the greatest importance in treating the local disease.

7. Bier's hyperemia and Beck's bismuth paste are valuable additions and adjuvants to treatment.

8. *Tuberculous secondary abscesses should not be opened unless there is some decided reason therefor, and, if opened, should be immediately sutured tight after the pus is evacuated. Otherwise, a second-*

arily infected sinus will surely result with its train of unfavorable symptoms.

9. Operations on the tubercular joints of children should be avoided if possible; not so with adults.

References:

1. Taylor: Hip Disease, Trans. Amer. Orthop., Assoc. Vol. IV, 1902.
2. Williams: Roentgen Rays in Medicine and Surgery (McMillan & Co., N. Y.).
3. Taylor and Knorr: Opsonic Index in Orthop. Surgery, Trans. Amer. Orthop. Assoc., Vol. XX, 1907.
4. Wolff-Eisnor: Beitrage zur Kind. der Tuberkulose, Bd. IX.
5. Calmette: C. R. Academy of Science, CXIV, 1907.
6. Von Pirquet: Wiener Medicinische Wochenschrift, 1907, Nos. 27-28.
7. Taylor: Skin and Eye Tuberculin Tests in Surgical Tuberculosis in Children.
8. Ochsner: Transactions International Congress on Tuberculosis, 1908.
9. Beck: Ibid and Illinois Medical Jour. April 1908.
10. Taylor: Johns Hopkins Bulletin, No. 45, Feb. 1895; Med. News, March 23, 1896; Tran. Amer. Orthop. Assoc., Vol. XII., N. Y. Med. Jour., May 12, 1900.
11. Bier: Hyperemia, W. B. Saunders, Philadelphia.
900 St. Paul Street.

What is the Future of the Medical Profession.

By H. C. Buck, Fries Point, Miss.

If one reads current medical literature the fact is forced upon one that there is a spirit of egotism and usurpation invading the profession, seemingly an effort or desire to centralize power in the hands of the chosen few; again if one reads and keeps abreast of the times one will learn that the rights and privileges of the individual physician are being menaced by those in high places. In some of the States there is almost open war between the physician and the retail druggist, and an effort is being made to get a law enacted forbidding physicians dispensing their own medicines and compelling them to send all their prescriptions to the retail druggist. The Kentucky State Medical Association passed a set of resolutions urging every physician in Kentucky to use in their practice only such remedies as are contained in the U. S. P. and N. F., and endorsed and recommended by the Council on Pharmacy. There are those who claim the Independent Medical Journal is a menace to the welfare of the profession and should not be read by physicians, that the physician should confine his reading to those journals that are the organs of the

State and National Medical organizations. Does not this look like an effort, a desire to throttle freedom of thought and expression? On May 12th, 1908, the Hon. J. R. Mann, of Ill., introduced a bill in Congress entitled, "A bill relating to transportation of habit-forming and poisonous drugs in interstate and foreign commerce, and other purposes." This bill is worthy the careful reading of every physician. The bill states, "that it shall be unlawful for any person, firm or corporation, to send, carry, ship, or bring into any State, Territory or the District of Columbia, by freight, express, mail or otherwise, from any other State, Territory, or the District of Columbia, or from any foreign country, directly to a consumer, or to sell, or furnish, or give away, or have in his or her possession (except as provided for in this section) any poisonous or habit-forming drugs." The bill mentions nearly or quite all of this class of drugs that are used in the practice of medicine. The bill says: "*Provided, however*, that the above provisions shall not apply to sales at wholesale by jobbers, wholesalers and manufacturers, to *registered retail druggists* (italics ours) or to each others or to sales made to manufacturers of medicinal remedies or pharmaceutical preparations, for use in the manufacture of such preparations, nor to sales to hospitals, colleges, scientific and public institutions." This bill gives the physician permission to prescribe these remedies, that is, write a prescription for them, to be carried to the retail druggist. The same privilege is given Dentists and Horse doctors, but according to the reading of the bill it shall be unlawful for a physician to carry hypodermic tablets of these medicines, or administer them; he must write a prescription and let the family or nurse administer the remedy. In the Southern States and many of the Western States very large sections are devoted almost exclusively to agriculture, hence there are very many physicians located in rural districts, many of them miles from any drug store; these physicians are necessarily compelled to carry a small stock of drugs and dispense their own medicine. Often they are near the State border and have to buy their drugs from another State, few if any of them are registered retail druggists. What is the result? Under this bill he is compelled to write an order or prescription (the bill says written prescription or order) and his patron is forced to go several miles perhaps for a dose or two of morphine or a few strychnine tablets. We are asked to confine our prescriptions to those remedies found in the U. S. P. and N. F.; that is, those that are endorsed and recommended by the Council on Pharmacy.

In an article by Dr. Torald Sollman, entitled "The broader aims of the Council of Pharmacy and Chemistry," he says, "The Pharmacopeia in itself is not a dispensation. Let us look forward to the day when the Pharmacopeia will contain all the indispensable scientific remedies and nothing else—but that day has not arrived," he says further, "I am convinced that all the worthy remedies are contained in the trio—Pharmacopeia, National Formulary and new and non-official remedies—and that every physician should confine his prescribing to these. But I know also, that not all the preparations contained in these are indispensable, or indeed desirable. Again he says, "The physician is not absolved from the necessity of exercising his own judgment." What are we to understand by this? It is a fact beyond dispute that there are many remedies that are not endorsed and recommended by the Council on Pharmacy. Are we permitted to use our judgment as to the use of these? Who but the attending physician is held responsible for the welfare of his patient? Who is censured if the patient dies? Can he get release from his responsibility by saying to the relatives and friends of the patient that he used those remedies endorsed and recommended by the Council on Pharmacy? What do they know or care about the Council on Pharmacy or what remedies we use just so we give relief or cure them? It seems to us that if there is any man that should be free it is the physician, and he should be allowed to go to the bedside of his patient untrammelled by the dictum of any man or set of men, but free to use those remedies that in his judgment will be most beneficial to his patient regardless as to where those remedies are to be found or the source of his knowledge. Those of us who are country doctors are often forced to rely on our own resources in cases of grave emergency, hence we learn to accept and appropriate knowledge often from very humble sources long years before "Ingluvin" was discovered I learned from an old negro woman that tea made from the inner lining of the chicken's gizzard was good for certain forms of nausea, "this knowledge has helped me over very many rough places." "Am I expected to throw away this knowledge and abandon the use of this remedy because it is not contained in the trio, nor endorsed and recommended by the Council on Pharmacy?" What object is in view? We are told that the Council on Pharmacy is laboring for the upbuilding of the profession: does it not seem that they have peculiar ideas and pursue a peculiar course? The great J. A. M. A. in its management claims to have the general welfare of the profession at heart. Yet we are told

that Dr. Simmons says he considers the Mann Bill one of the best bills ever introduced in Congress. Is he in earnest? If so, is he not working in the interest of the retail druggist and not for the physician? If the Council on Pharmacy is in earnest, why build a Chinese wall (as for example the trio) and confine the profession within its bounds? Instead of doing this would it not be better to encourage, in the profession, a spirit of independent thought and investigation? Is it not just possible that all the wisdom and therapeutic knowledge of the profession is not centered in the Council on Pharmacy? And that there others who are worthy and well qualified to judge the value of therapeutic agents? Does not the course of this Council and the doctrines advocated by its ardent admirers have a tendency to discourage independent study and investigation and make us feel that we are dependent on this great Council and the powers that be for such therapeutic knowledge as we may get? Hence we ask, what is the future of the medical profession?

Multiple Abscesses of the Skin in a Nursing from Colon Bacilli.

F. Auché says the abscesses of the skin in infants are rarely caused by the colon bacillus. He records a unique case of a new-born infant who had multiple abscesses of the thighs; from the pus of which a pure culture of the colon bacillus was obtained. The infant soiled its clothes and in all probability the germs were derived from the discharges from the bowels and entered through the unbroken skin. It seems very unlikely that they came by way of the circulation from the bowels.—*Journal de Médecine de Boreaux*.

New Phosphorus Medication in the Treatment of Rickets.

Paul Sittler has used various of the newer forms of phosphorus compounds in rickets, and has found a combinations of the glycerophosphates of lime and the nucleate of soda of the greatest value. The amelioration of symptoms is rapid. A child under one year takes a powder of .05 gram of the glycerophosphate and 0.1 gram of nucleate in sweetened water or milk twice a day. With older children the dose is taken oftener. The author obtains better results when hygiene and fresh and hydrotherapeutics are added to the medication.—*Revue Mensuelle des Maladies de l'Enfance*.

Medical Success.

When a student secures his degree and license to practice, what is the prospect for

his future? The late sir James Paget followed the after-histories of 1,000 medical students. Of these 23 achieved distinguished success, 66 considerable success, 507 fair success, 124 very limited success, 41 died while students, 87 died within 12 years of commencing practice, 56 failed entirely in the profession, and 96 abandoned it for some other calling. At a later date Dr. Squire Sprigge made a somewhat similar study of 250 students, and with somewhat similar results.—*Edin. Med. Journal*

Calcidin Not Only for Croup.

The fact that Calx Iodata (Calcidin, Abbott) is about the most generally useful of all the remedies suggested for disorders of the respiratory tract, is becoming more apparent as time passes. "Calcidin for Croup" has been a species of "catch phrase" and many practitioners perfectly familiar with the marvelous efficacy of the preparation in this disease looked further afield (and with poor success) for an efficient remedy for bronchial and pulmonary congestions. Somewhat slowly, but very surely the value of Calcidin in all infections or inflammations of the upper respiratory tract is being acknowledged by doctors throughout the country.

Bronchitis, laryngitis tonsillitis, etc., all are speedily controlled by the proper use of Calx Iodata with other indicated adjuvant remedies.

Children take Calcidin easily and it may be given either dry on the tongue, in solution or in capsule or tablet form.

The Abbott Alkaloidal Co., Ravenswood, Chicago, will cheerfully send samples with very full and instructive literature upon request. If you haven't tried Calcidin, do so now.

Trichocephalus Enteritis.—Garin (*Progress Medicales*) says that many cases of enteritis, due to trichocephalus dispar, are not recognized. This parasite does not always cause enteritis when present in the human intestine, nor are other symptoms characteristic of intestinal parasites (anemia, nervous symptoms, etc.) always present. The symptoms of trichocephalus enteritis are diarrhea, colic, vomiting and rise of temperature. The evacuations are usually very frequent, often sanguinous. Besides the severe colic, there is often localized pain over the region of the cecum, resembling appendicitis. Vomiting may be reflex from the lesion in the bowel. The condition may be chronic, persisting for a number of years. The diagnosis rests upon the microscopical examination of the stools. He found that purgatives, combined with thymol given in gram doses in the morning for three days, were beneficial.

Charlotte Medical Journal

Published Monthly.

EDWARD C. REGISTER, M. D., EDITOR.

CHARLOTTE, N. C.

THE SERUM TEST IN SYPHILIS.

Accurate diagnosis is an important factor in the practice of medicine. In fact it is *the* important factor. Every diagnostic measure proposed, therefore, is an advance in medicine and is eagerly grasped by the progressive physician. A new diagnostic measure places into his hands, as it were, another staff upon which he can lean. Particularly is this the case when this new method of diagnosis is one that promises something positive, one that will point an unerring finger and give assurance that this is so. The sciences and the arts are forever ransacked for aids in diagnosis and therapeutics. It was so with the Roentgen rays. Scarcely has the author pointed out the phenomena, when Medicine appropriated the mysterious rays for its own field and forced it to yield up all its powers to diagnose accurately and relieve suffering. Optics, acoustics, chemistry, biology and other sciences must contribute their quota of share to aid diagnosis and be helpful in the art of healing. The newest of these diagnostic measures is the Wasserman's reaction in syphilis. It is claimed that this test has given 100% results. A patient may suffer with a disease which has no relation to syphilis, like carcinoma or tuberculosis, and at the same time the blood serum of the patient gives a positive Wasserman's reaction, in all these cases autopsy studies have proved that syphilis was present in these cases in one or more of the organs at the time the reaction was taken. The test has already undermined the much relied on Colle's and Profeta's Laws in syphilis, by showing that these mothers and these infants have latent syphilis. The value of a diagnostic measure like the one under consideration, can hardly be estimated fully. A patient, for example, has a mysterious ailment which defies diagnosis, the Wasserman test is positive, although the patient may suffer with an associated condition, nevertheless the knowledge that there is a latent specific disease present will be of immense help in instituting the proper therapeutic measures. Again, a patient having had syphilis some years before, may consider himself rid of the specific virus, but the Wasserman reaction shows that he is not free of the taint. Therapeutic measures instituted now will ward off in him those ravages of the disease that we know to fol-

low in the wake of syphilis. How many cases of *tabes dorsalis*, how many cases of paresis may not be warded off? No one can tell the possibilities of such a preventative measure. As the treatment of syphilis stands today, an arbitrary date is set for the length of time of the administration of mercury and iodides. We have no way of telling if a latent syphilis is present or not. If the patient followed out instructions and kept up his treatment for three or four years, we felt that he ought to be cured. But we could never be sure that the infection had been eradicated. With some individual it may take ten years to rid him of the infection instead of three years. With the Wasserman reaction we have something positive to go by. It tells us that that particular individual has latent syphilis and is in need of treatment for his ailment to prevent further tissue changes. It is hoped that laboratory experiments will simplify the technique of the Wasserman reaction and bring this test into a sphere of practicability.

ARNETH'S PROGNOSTIC LEUCOCYTE COUNT.

The past few years have witnessed most remarkable progress in all branches of medical science. Methods of diagnosis are constantly being perfected, serum therapy has received a most wonderful impetus by reason of Wright's discoveries and only recently Arneth has advanced a theory which now seems to enable us more accurately to advance a prognosis, at least in those conditions in which the phagocytes are supposed to play a defensive part. Arneth divides the polynuclear leucocytes into five classes, according to the number of nuclei or nuclear lobes which they contain. It is said that the relation between these classes varies somewhat widely in health, but is fairly constant in one and the same individual. In the first group are classed the mono-nuclear neutrophiles, with three subdivisions: (a) cells having one round nucleus—these are the myelocytes or youngest form of neutrophile; (b) cells having a bent or slightly indented nucleus, the metamyelocytes; and (c) cells having a deeply indented or bilobed nucleus, the true polymorphonuclear cells. These three divisions make up Group I. The first two are rarely met with in normal blood; the third are found present from 4 to 9 per cent. Group II consists of cells having two distinct nuclear fragments or two nuclear lobes connected by a thread of chromatin. These cells are present from 21 to 47 per cent. Group III contains cells having three nuclear fragments or three nuclear lobes. This group numbers 33 to 48 per cent. Group IV consists of those cells having four fragments or four lobes and num-

bers from 9 to 23 per cent. Finally, Group V comprises cells with five or more nuclear fragments or lobes and numbers only 2 to 4 per cent. According to the theory under this classification the cells having three, four or five nuclei—or in other words the older cells—have the greatest phagocytic activity; and hence the more of these cells present in inflammatory lesions, the better the prognosis. The actual number of the three, four or five nuclear cells, taken in connection with the leucocyte and differential counts, may be considered the index of phagocytic activity. According to Arneith the nuclear count is of particular value in supplementing the leucocyte and differential counts in certain cases where both remain normal, the nuclear count alone giving an index into the gravity of the condition. Under pathological conditions, the change in the nuclear count is as follows: in the event of an inflammatory or septic process, the four or five nuclear cells diminish or disappear and the younger forms become relatively more numerous, thus swinging the balance against the defensive processes. If the condition remains increasingly severe and the patient offers poor resistance, the three and two nuclear cells still further diminish, while the one nuclears relatively increase. The prognosis at this point is very grave. Whereas, if the patient's resistance improve and the disturbance gradually subside, the two and three nuclears again increase, the fours and fives reappear, and the normal balance is again restored.

Kaplan assails this theory of Arneith's, his investigations tending to prove just the opposite of what Arneith believed. He made observations on the action of defibrinated blood upon the staphylococcus, with a view to studying their phagocytosis, and found that the one nuclear cell were capable of taking up more staphylococci than any other one group, and that the two and three nuclear cells were next in order. Chace considers the nuclear count of very great prognostic value, but believes that its usefulness is limited to chronic processes.

Smith and Lansing, to whom we are indebted for the above resume, in their investigations carried on in the Lying-in Hospital of the city of New York have likewise found that their results more nearly coincide with the conclusions of Kaplan: i.e., that the younger cells, the one or two nuclear, rather than the older ones, are the active phagocytes. According to their average figures the greatest phagocytic capacity lies easily with the two nuclear cells; next, with the ones, then the threes, then the fours, and, lastly, with the fives.

After all, while Arneith may not have reached proper conclusions in his investi-

gations, there may yet result some accurate knowledge concerning the value of the nuclear count, provided those who can will observe their cases with sufficient scrutiny.

AGGRESSINES.

The extensive study of immunity during the past few years has demonstrated the important role which the blood-serum plays in this process. Not only does the serum contain the substances which neutralize poisons produced by certain bacteria, but the work of Flugge, Nuttall, Buchner and others has shown that normal serum may contain substances directly antagonistic to bacteria, bactericidal or bacteriolytic substances, and that these may be markedly increased by infection or inoculation, and so play an important role in immunity. The serum has even been shown to play an important part in that form of immunity spoken of as phagocytic. It has been shown by Denys and Le Clef and others that the presence of serum is favorable, and in certain cases, necessary for the ingestion of bacteria by leucocytes, and Wright has much extended our knowledge of this action of the serum and has ascribed it to certain hypothetical substances in the serum, "opsonins." All of these actions of the serum are directly antagonistic to infection and the serum, therefore, has come to be considered one of the most important, if not the most important, constituent of the body for preventing infection or for destroying the infectious agent if it be already present.

A recent number of the *Johns Hopkins Hospital Bulletin* contains a highly interesting article by Drs. Cole and Smirnoff which, after calling attention to the above facts, goes on to say that under certain conditions substances seem to be developed in the blood which, in contrast to the action of those substances already mentioned, may exert an influence directly favoring infection. Bail first advanced this idea. In the course of his experiments upon animals he observed that the pleural or peritoneal exudate of animals which had succumbed to a fatal dose of a particular micro-organism when rendered germ-free by filtration is harmless when injected into animals in moderate amounts. If, however, this exudate be added to non-harmful doses of the bacteria in question, or to doses which alone produce only moderate symptoms, and the mixture be injected into animals, it is found that the animal dies, while the control animal, which has been injected with the same dose of bacteria alone, lives, or that the injected animal dies more quickly than the control animal, or, lastly, that the symptoms produced are much more severe than

those which occur in the control animal. Bail, in interpreting these results, says that during the course of infection there are produced by the bacteria substances, harmless in themselves, which neutralize or antagonize the natural defenses of the body. These substances are present in the exudates caused by infection, and after the bacteria are filtered out these substances remain. When these are injected into an animal, together with bacteria, the defenses are paralyzed and a small number of bacteria, which under ordinary circumstances would be overcome by the body, are able to multiply and produce their effects. To these hypothetical substances Bail has given the name "aggressines."

Wasserman and others, however, call into question this interpretation given by Bail. They maintain that these results are produced not only by filtered exudates, but also by the filtrates of bacteria grown in vitro, not only in serum but in other media as well, and even by the watery extracts of the bacteria. They claim, moreover, that the filtered exudates are not entirely harmless, and that the results obtained are probably due to the added deleterious effect of the serum. In the case of watery extracts, it is thought that it is a question of free receptors which attack the bacterial amboceptors and so render them ineffective. The weight of the evidence seems at present against the view of Bail, but whatever the interpretation, it is evident that we are here dealing with serum changed during the course of infection. Up to the present our idea of the normal serum in relation to infection has been that it contains substances and exerts effects antagonistic to infection. Cole and Smirnow, on the other hand, in the course of their work relative to immunity against *Bacillus Pneumoniae*, have observed a phenomenon which seems to show that, under certain conditions, foreign serum, at least, may produce an effect directly favorable to the course of infection, an effect somewhat analogous to the aggressive action described by Bail.

TRI-STATE TRANSACTIONS, 1908.

This journal in making acknowledgment of receipt of the 1908 *Transactions of the Tri-State Medical Association* (Virginia and the Carolinas) cannot speak too highly of the excellent manner in which the secretary, Dr. Way, has accomplished the task of editorship which his official position imposes upon him. Indeed, if possible, he has quite surpassed himself in this instance. In a most comprehensive manner and with the least possible delay the volume has been published, and, ere this time, is in the hands of the members. Those who attended the

Charlotte meeting will, upon a perusal of the pages of this report, realize how thoroughly the work has been accomplished. The pleasing style of expression, the logical order of arrangement, and the faithfulness with which the transactions of the sessions have been transcribed contribute to make the book one of the best, indeed we are constrained to say that it is the best, that has yet been published. After a very thorough synopsis of the minutes covering several pages, the larger portion of the volume is given up to a report of the proceedings and discussions of papers, report of Session of Executive Council with list of new members, President's address, and papers read. Finally, each volume contains a copy of the Constitution and By-Laws of the Society and a list of members classified according to the component States. A very exhaustive index makes reference quite easy. A most excellent photograph of the brilliant and accomplished president, Dr. Stuart McGuire, of Richmond, together with a facsimile of his autograph, adorn the book as a frontispiece.

We have already had occasion to mention, in these columns, some of the papers read at this meeting and now included in this volume, and indeed some of them have already appeared in previous issues of this journal. We could not speak too highly of the uniform excellence of these papers which are presented before this society and of the very marked scientific spirit manifested by the discussions, a most accurate report of which Dr. Way has given. There are papers of which it can almost be said that they are epoch marking, and they give evidence that there are men right here in the Carolina's and Virginia who are doing things, who are up-to-date, whose minds are keen and whose eyes are open. The volume also includes papers read by distinguished and learned guests from other States, papers which likewise enhance the value and excellence of the *Transactions*.

Dr. Way, we believe, is due the thanks of every member of the Society for his meritorious work. He is never the man to shirk a duty or to perform a task in a half-hearted, half-way manner. The publishers, Messrs. Edwards & Broughton, of Raleigh, are also to be commended for their admirable execution of the printing and binding.

PNEUMONIA AND FRESH AIR.

With shouts of fresh air to the right of us, fresh air to the left of us and from the house tops, it is interesting to see what fresh air has accomplished in reducing the morbidity of that King of Scourges, pneumonia.

In drawing conclusions from a given kind of treatment, *ergo hoc* is a dangerous deduc-

tion. We should never conclude that a painful joint is cured by the tabasco sauce rubbed upon it, even though it has healed simultaneously. Neither shall we believe that harmless old cactus is a heart drug, though the broken compensation may accidentally be restored while we give it.

The antiseptic treatment of typhoid proves nothing more than does the quinine or blood lancet therapeutics of pneumonia.

Doctors may come and doctors may go, generations of morphine, centuries of veratrum, decades of aconite, years of anti-phlogistics may pass; this doctor's sure-cure and that doctor's herb "without a death" will be forgotten, yet pneumonia, the King, will kill one or two in every five.

As long as accurate statistics have been kept, as long as truthful and unprejudiced physicians with large experience have given testimony and with every known and unknown treatment, pneumonia has carried off one or two victims in every five who have that dread malady.

Twenty to seventy-five consecutive cases of pneumonia may survive a given treatment, yet when the four hundredth has been counted, the mortality will surely count from twenty to thirty per cent.

Dr. G. W. Norris has just reported the small number of four hundred and forty-five cases treated with all windows wide open regardless of weather conditions. These added to the 991 cases reported by Ashton and Landis in 1905, make 1436 (all whites) treated by the open-air method. The mortality in these cases was exactly fifty per cent.

Although Norris thinks he has achieved a reduction in mortality by the fresh-air treatment, he produces no proof to that effect. On the contrary his mortality is just exactly twice that under old conditions, viz., 50 per cent. against 25 per cent. with any other treatment.

We are, therefore, forced to admit for the time being, at least, that at last a method of treating pneumonia has been unquestionably inaugurated, that really and truly increases the mortality of pneumonia.

TRI-STATE MEDICAL ASSOCIATION.

The next meeting of the Tri-State Medical Association of the Carolinas and Virginia, which will be held in Charleston, S. C., February 16-17, 1909, is only one month from the date of issue of this Journal. Last year the Society met in Charlotte and it was one of the best ever held in the ten years of its existence. There is no reason why the Charleston meeting shouldn't be equally good, for Charleston is a city which, aside from the fact that the Association will meet there, offers many external attrac-

tions. It is easily accessible by both land and water, and Charlestonians are famed for hospitality. That everything possible will be done that could contribute toward the success of the meeting and the comfort and entertainment of visitors is guaranteed by the committee on arrangements, composed as it is of the following well known and eminent Charleston doctors: Drs. A. E. Baker, R. S. Cathcart, C. W. Kollock, Chas. M. Rees, Manning Simmons, and T. Prioleau Whaley.

The officers of the association are as follows: President, Dr. Albert Anderson, Raleigh; Vice-presidents, Drs. Robt. C. Bryan, Richmond; J. E. Stokes, Salisbury; W. P. Timmerman, Batesburg; Secretary-Treasurer, Dr. J. Howell Way, Waynesville, N. C.

The Annual Debate will be held February 16; the subject of which is "The Diagnosis and Treatment of Typhoid Fever." Leaders of Debate: Drs. W. L. Robinson, Danville; Edw. C. Register, Charlotte, and J. H. Hamilton, Union. This announcement of a topic and debaters promises that something will be said that will be worth while.

Those who desire to contribute papers at this meeting should send the title of same to the Secretary, Dr. Way, at the earliest moment possible. He is leaving nothing undone to ensure the success of the 1909 session. There will be, as usual, a large number of visitors from other States, the presence of whom always adds to the value of the scientific deliberations.

The Tri-State Association serves a most useful purpose. Composed of members of the medical profession of States which are most closely identified by location, social ties and community of interest generally, it is both pleasant and profitable that the doctors of these States should meet annually and learn to know each other better. Standing as it does between the State Medical Society and the American Medical Association, although in no sense a subdivision of the latter, it offers to our doctors a somewhat broader field than exists within the scope of a State Society, while on the other hand opportunity is afforded, by reason of the comparatively small territory embracing its membership, which cannot possibly be found in the National Association—opportunities to be heard and to hear what others are doing, and this without the great expenditure of time and money which attendance upon the larger association entails. This is not in any sense intended to convey the meaning that we would decry the great benefits which accrue from membership in the American Medical Association, but the point to be noted is that there are doctors

who can find it possible to attend the meetings of the Tri State Association and derive immense benefit from the experience, when, on the other hand, they would only exceedingly rarely—perhaps never—believe that they could spare the time for, or incur the expense of, a visit to one of the meetings of the A. M. A.

From its small beginnings eleven years ago, in the face of much opposition on the part of those who considered that there were already enough Medical Societies, when its very existence was precarious and full of anxiety for those responsible for its organization, the *Tri-State* has thrived and prospered, until at present its membership includes almost three hundred of the very flower of the medical profession of the States of Virginia, North and South Carolinas. There are many yet who should become members, for it pays a man to attend medical society meetings, uplifts him, broadens him, gives him a holiday, breaks the monotony of his daily round of duty and enables him to go back home and do better work than ever.

With the present organization, and the energetic and enthusiastic officers at its head we venture to prophesy that the 1909 session in Charleston will be the best ever.

ORGANIZED MEDICAL DEFENSE.

Kentuckians are noted, among other things, for their clanishness. This holds good for the medical profession of that State as well as for her people generally. The latest evidence of this character is the formation within the Kentucky State Medical Association of a Medical Defense Branch, the object of which, as stated in the Constitution, is the defense of its members against unjust suits for malpractice. All members of the State Medical Association in good standing may become members of this branch upon the payment of an initiation fee of \$5.00 and an annual fee of \$1.00. Most malpractice suits are mere blackmailing affairs, but they are always exceedingly troublesome and expensive to the doctor, no matter how innocent he may be. Several States have previously inaugurated this self-same plan of defense and it is said that in none of these States has a malpractice suit been decided finally against a member. Naturally a doctor feels stronger when he knows that a united profession is backing him. There can be small doubt but that the public will in some instances construe this as an attempt to cover up and protect misdeeds on the part of medical men, but the fact is that the great majority of such suits are unjust, and oftentimes the doctor is granted small consideration at the hands of juries. Standing alone and unaided the

defendant has but little chance of success, but with an organized body of his brethren behind him not only does he individually feel better able to defend himself, but the ultimate effect must be to reduce the number of these blackmailing attempts against medical men.

The Association employs a firm of lawyers as General Counsel upon a regular salary and also will retain the strongest firm of local lawyers which selection is made by the defendant. It guarantees to meet all legally taxed court costs. As provided in the Constitution the assistance in defense shall be only of such members of the Kentucky State Medical Association as are in good standing, and who shall have paid the initiation fee and the yearly dues for this special purpose. Neglect to pay the dues at the proper time forfeits all claim on the Association for any protection which it can afford and from membership in the Association. A member who has been dropped for non-payment of dues may again join the (Protective) Association upon payment of his annual dues. No doctor is defended for any action unless he was a member of the Protective Association and a resident of Kentucky during the time when the alleged malpractice was committed, and has complied with the regulations.

Some dozen other States have preceded Kentucky in this matter, and in all of them it is easily the most popular material proposition that has been taken up by the organized profession. Up to this time, every single lawsuit defended for one of its members by a State Association has been successfully defended. It is said that eighteen such suits are now pending in Kentucky, and the spirit back of them is spreading rapidly. Each of these will cost the defendant doctor from a hundred to a thousand dollars. At either figure, membership in the Defense Branch would be a paying proposition.

"WHY NOT EULOGIZE THE DOCTOR SOME?"

Occasionally there comes from a layman who is ready to recognize and eulogize the self-sacrificing elements of the doctor's work expressions which comfort and console him and make him know that he is not utterly unappreciated. In support of this statement we would call attention to the address delivered by Rudyard Kipling before the medical session of Middlesex Hospital in London, and which is of unusual interest because of the unique manner in which this distinguished author treated his subject. Mr. Kipling divided the whole world into two classes—doctors and patients. The patients, said he, look on doctors as

noncombatants look on troops fighting in their behalf against death. The noncombatants look to the doctors to make the best terms possible in this fight for life, which all sane men agree is one of the most important things in this world. From this it follows that doctors are among the most important people in the world. If they flew a yellow flag over the centre of population, they could turn it into a desert, and if they flew a Red Cross flag over a desert they could turn it into a centre of population, towards which men would crawl on their hands and knees. They remain now, perhaps, the only class which dare tell the world facts. Realizing all these things, Mr. Kipling concluded he would not try the patience of his hearers by talking to them about the high ideals and lofty ethics of a profession which exacted from its practitioners the largest responsibility and the highest death rate in the world.

The highest death rate in the world! And a bare competence for running that risk and doing that work. Offering no social or monetary rewards comparable with the work done or the burdens borne, yet young men in response to an impulse which perhaps they only dimly comprehend, flock into the medical profession. Says the London Spectator, from which we quote, the doctors see people at their worst, and they often make the best of them. They keep secrets without the oath imposed upon Roman confessors to strengthen their purpose. If a few black sheep exist among them; if cruelty—that worst curse of the moral nature—is wholly absent from no great congregation of men; if a few trade upon the nerves of the community; if a few are tied up in red tape, that is only to say that doctors are human. All all, people may live long lives and come across none of these; whereas it is hard to find a person who owes no debt of gratitude to some doctor or doctors.

Mr. Kipling has done what only a man of literary genius can do—he has heightened and deepened an almost universal sentiment by its strong and gracious expression.

GOLD STORAGE MILK.

The distribution of clean wholesome milk to large communities has been one of the interesting topics of discussion in the medical societies and lay press of the present day, and many facts have forced themselves on the public notice as the result. We have yet to struggle for a long time with the ignorance of the ordinary producer in regard to what constitutes a wholesome and safe product.

The growth of our large cities has created

such an increased demand for quantities of milk that various improvements and mechanical devices have been invented with a system of icing and shipping that would astonish the careless consumer if he should take a day off and visit the country bottling plants of the large dairy firms supplying these cities with milk and make him stop to consider more thoughtfully before he condemns them when his breakfast cream has turned sour on a hot summer morning.

The largest part of city consumed milk is produced many miles out in the country. It has to be weighed, separated, cooled, bottled, iced, and churned along for miles in the freight cars before it gets to the city depots for distribution, and then galloped over blocks of streets before it rests in the family ice chest. To keep the sweet flavor and present an acceptable article the milk has to be stored in ice for from twenty-four to thirty-six hours before delivery, and to serve the family must be iced twelve hours longer in order to grace the late dinner table of the city resident.

The average country housewife is skimming her pans of cream and throwing away the milk as sour and unfit for use at about the time city people are permitted to receive it as a fresh product, and so we may truthfully term it cold storage milk. The laws governing pure foods prevent the dairyman from using any means of preserving his milk except by methods of cleanliness and lowering the temperature.

Milk in its natural state was designed by nature to be consumed as soon as produced, and being an animal product, of complex combination of organic radicles it soon decomposes. The changes taking place under extreme chilling are no doubt slow and different in character than when it is subject to heat and the action of bacteria, but we have every reason to believe that changes begin to take place as soon as the milk is drawn, even when cooled and kept iced under the strictest cleanliness.

The food value of milk decreases with its age whether it be sweet or not, and this assumption can be appreciated most fully when it is tested in the feeding of young babies whose entire diet must be of milk. The adult has so varied a diet that what he loses from his milk he more than replaces by the various other articles of diet which he receives, but the milk-fed infant deprived of its mother's milk and asked to grow and thrive on the cold storage product from the country cow will soon demonstrate that there is something lacking. Put that same baby on the same amount of fresh cow's milk and it will not take an observer long to conclude that the child has been cheated on the twenty-four hour old product and

that with milk freshly drawn twice daily from the cow it is coming into its own again. That subtle something that has been chilled to death by twenty-four or thirty-six or forty-eight hours of storage shows itself as alive and active and puts new life and vigor into the baby as shown by its bright eyes, healthy sleep, pink skin and sturdy growth from the time the change is made.

The many accidents which prevent mothers from completely nourishing their infants at the breast, and the necessity of artificial feeding as we find it should make us look ahead and prepare for such emergencies. Fresh cow's milk is the only practical substitute for mother's milk, and every large city in our country should provide for cows to be kept within the city limits that a strictly fresh article can be furnished for such babies, during their first six or eight months of life; after that age they can be given a mixed diet which will not render the strictly fresh milk so necessary.

Provision can easily be made in most cities, even though they be large and land valuable, for a few cows to be kept during their milking season and vacant lots should be called into service for them as they are now being used for vegetable gardens by the Bureau of Charities in some places to aid the poor.

Each neighborhood, if necessary, should have a pasture reserved by the city to permit the proper care of a few cows that the young infants be given what is necessary for their correct growth and health.

Goats can also be utilized for the same purpose, though they are less appreciated in our country than abroad. The foreign population of manufacturing districts in large cities often manage to keep milk goats on their premises, and though they are generally considered merely as a queer appendage to the otherwise strange customs of European peasants we would do well to take the little animals more seriously into account as a source of fresh milk for infant feeding in cities.

PROPHYLAXIS OF ECLAMPSIA.

The complication of eclampsia in a woman going through the experience of maternity is one of the most terrifying and dreaded of all the accidents to which such women and their medical attendants may look forward.

This is true because the patient is often the mother of a young family to which her life is precious, and the disease is so difficult to overcome when it has once grasped her, as no remedy or set of remedies has been discovered that is sure or swift enough in action to place the medical attendant in a confident frame of mind.

When eclampsia sets in, it is a fierce and hard fought struggle that swiftly ends one way or the other. With all our study, experiments and theories, during the last twenty-five years the only progress we have made toward a successful handling of these cases has been to emphasize the importance of forcing elimination, and to fix the cause as a toxemia due to some unknown element or elements retained in the blood or lymph of the patient.

We believe that there could be a diminution in the number of cases occurring, and less mortality in those that develop, if a keener look-out be instituted by the medical advisers, and an education of the women themselves, as to the causes leading up to the extreme condition.

The toxemias, which are no doubt the cause of eclampsia, can be modified, and at times completely relieved, if recognized *early* and treated rigorously. Too much stress in the past has been laid upon the one test, that of urinalysis, and physicians have held themselves blameless, when they have carefully examined the urine and found it free from albumen, and yet have been surprised by eclampsia.

There are many signs of toxemia outside of the findings in the urine and they are plain and easy to recognize, when once we are alive to their importance.

A pregnant woman complaining of headaches, indigestion, either through stomach or intestinal disorders, sleeplessness, dullness or melancholy depressions, undue vomiting or nausea, neuralgia, dizzy sensations, blurring of the eyes, rapid pulse with high tension, and many other mild symptoms, should at once be put on the list of suspected toxemias and her daily habits carefully overhauled by her medical adviser, to correct the conditions if possible.

There are two classes of women that are likely to suffer from the toxemias of pregnancy, of which eclampsia is one of the extreme results. The first and most common is the woman who by heredity has a defective metabolism, which renders her system under ordinary circumstances more or less loaded with toxic elements. She is the type that suffers from indigestion, eczemas, rheumatism, migraine, etc., and on physical examination will show poorly developed mammae, a narrow pelvis and defective development in other directions. She probably will give a family history touched with intemperance and hereditary taints, but a physical examination and carefully recorded personal history will usually mark the type.

The other class of women differ from this inasmuch as they are ordinarily well and wholesome and of good physique, but in-

clined to luxurious living and little exercise. They have faulty habits of life, and it is easy in our prosperous country to find many such.

Society prohibits women from much active exercise, when the male members of the family have been successful in their sphere of providing. Little is done to perfect their muscular development, and when they come to the physical tax and muscular effort required by child birth, they have no reserve strength to meet their labors, and increased inactivity, with over-eating, is the rule during pregnancy, which loads up the system with waste material to poison and further weaken the general musculature.

It has often been suggested that our women have wasted their substance, and become weak and delicate creatures, by our American habit of educating their brains in our colleges at the expense of their physical development, but that is not a fair conclusion. A proper proportion of exercise with a balanced ration will easily put American or any other race of women in a physical state to withstand the normal demands of womanhood and motherhood, providing the ancestors (male as well as female) have been reasonably healthy and temperate, without cutting off their college courses.

The hygiene of her life must be more carefully supervised during her pregnant state than at other times if we wish all to go well, as any errors in the habits during that period will throw the delicate machinery out of order, creating more disaster than under ordinary circumstances.

Slight symptoms of toxemia may be present and unmentioned by the patient for weeks and even months before eclampsia appears. The physician should seek to draw the patient out by simple questions when she brings the urine for analysis and not satisfy himself with the simple analysis. The signs of toxemia are varied but positive, and no patient has a toxic condition without having symptoms, and when they appear though only by mild headaches, high tension of pulse, sleepless nights, dullness or fits of depression, or any of the queer feelings that women are wont to think belong to the pregnant state as a natural consequence, the medical attendant should be on his guard, and treat the case with eliminating agencies.

Any pregnant woman who does not feel comfortable should be taught to express the nature of her discomfort to her physician and not rely on the advice of her friends and neighbors, who often make light of it all and reassure her that the whole thing is "natural." To be safe, every woman in a pregnant state should be under her phy-

sician's observation early, and should undergo a rigid physical examination, such as a life insurance company would require for a five thousand dollar policy. Her complaints should be considered patiently and a record of pulse and general well being recorded.

If she has a mild toxemia, she will describe it so that the doctor will recognize it and the proper treatment will be suggested. Regulate the diet, give calomel, baths, rest or exercise, as the severity of the symptoms indicate, till the system is relieved of the toxic load under which it is laboring. We should not wait for albumen to appear in the urine, but work to prevent it from appearing, and there will be fewer cases of eclampsia recorded.

STATE TUBERCULOSIS SANATORIUM.

Dr. J. E. Brooks, the capable superintendent of the recently established State Sanatorium for the care of patients afflicted with tuberculosis, has announced to the profession of North Carolina that the Sanatorium is now open and actually receiving patients. No act the legislative body of the old North State has ever passed has for its object a more beneficent purpose than that which provided for this institution. Those who have watched the ravages of tuberculosis and the utter need of many of its victims for proper care have awaited this event with the knowledge that it is a long step toward the eradication of the dread disease from within our borders. At present no patients are taken except those in the early stages. Those far advanced are not received because as yet there is no place to accommodate them, and it is not deemed wise to put the patients in the early stages along with those who are hopeless. This is quite right, although it is to be hoped that the time is not far distant when accommodation will have been provided for all. Dr. Brooks says the location is a beautiful one, in the deep sand hills, where the atmosphere is as near perfect as can be found in our State. The Sanatorium is on the Aberdeen and Rockfish R. R., in Cumberland county, about eight miles from Aberdeen. At present it will accommodate about thirty-six patients—an equal number of men and women.

The hospital and treatment are in keeping with the work outlined by the International Congress at Washington in September last. Dr. Brooks adds: "If you have a patient you wish to send to us, write me at Montrose or Aberdeen, and I'll write you fully, conditions and how to get here."

COCAINISM AND THE NEGRO.

Perhaps the deepest political and economic problem presented to this country

relates to the negro, who, through no fault of his own, has had his lot cast among the whites. The problem crops up in every phase of life, social, political, economic, medical and hygienic; and the solution seems yet far distant. Especially do these problems present themselves with grave significance to the people of the South. Among us the negro is an immense factor to consider in the fight which is being organized against the "great white plague;" and leaving out any mention of his part in politics or strictly economic questions, he is likewise a considerable factor in the prohibition movement which, for some time past, has been agitating the country so greatly. In any city of the prohibition States of the South the great majority of those who illegally deal in the sale of whiskey, or, in other words, those to whom the term "blind-tiger" is applied, belong to the colored population. But the phase of the problem which to our mind assumes the gravest aspect is not drunkenness but the very prevalent use of drugs, among which cocaine takes first place. Remarkings on this editorially some months ago the *Boston Medical and Surgical Journal* gave evidence of knowledge of certain conditions which exist in our midst of which perhaps the great majority of our own people are not cognizant. The blot upon the fair name of the South has been for years the prevalence of lynchings, chiefly of negroes who have committed the nameless crime; yet the crime of lynching has not been confined to the South and a number of such occurrences north of the Mason & Dixon line has apparently mitigated somewhat the offence committed by Southern mobs; at least criticism has been less rampant. It is impossible to account for all the insensate crimes committed by negroes by saying that they were "doped" or under the fiendish influence of cocaine, but that a number of crimes of all kinds are due to the effect of this drug on the blacks cannot be questioned. Quoting from the above-named journal, "we know that gentle, cultivated and ordinarily well-poised individuals of the more highly organized white race are stimulated by cocaine to acts of violence—due to the hallucinations induced by its use. How, then, can we expect otherwise than that an illiterate negro, living in a semi-barbarous environment, and unaccustomed to social discipline, will, when excited by this drug, become even more uncontrolled?" Sometimes the crime against white women is committed in unsophisticated rural districts, but the greater number of this particular crime as well as other offenses against society occur in cities, and near mining, lumber, railroad and like

campes where negroes, employed and unemployed congregate in great numbers. Murders and deadly assaults are committed with steadily increasing frequency under circumstances of absolutely fiendish savagery; the abandoned recklessness of consequences and the astounding indifference to the suffering of themselves or their victims being a matter of common observation. To quote further and reveal an astounding statement the editorial already quoted says; "There is good reason to believe that cocaine is furnished the negro in such industrial settlements. An official of one of the largest drug houses South of New York says that his firm ships enormous quantities of the drug to all parts of this section (the South) of the country. The orders come from contractors and operators of the most extensive kind, and these say that they could not keep their working forces together for so much as a week if the men were unable to procure cocaine in the immediate vicinity."

The above facts are abundantly testified to by men working in gangs, and in pursuits and otherwise than agricultural. A negro excited by cocaine is ten times worse than a negro drunk from whiskey. Under the influence of the former he is an incarnate fiend and there is no reader of these lines who cannot recall instances of unprovoked assaults and murders and nameless crimes committed by negroes, the most probable explanation of which may be found in the widespread habit of doping with this drug. While the prohibition wave is at flood tide it might be well for our philanthropists to turn their eyes toward this question and to seek its solution. There seems to be small good in fighting so valiantly the use of whiskey when we ignore another drug in the increasing use of which there exists potentialities for evil which transcend any which have existed because of the liquor traffic.

REGENT OBSTETRIC PATHOLOGY.

Cragin has recently pointed out that the chief pathological lesion found in pernicious vomiting of pregnancy, which is a fatty and hydropic degeneration of the liver, is apt to be diffuse, but that in some cases it is zonal and goes on to necrosis. This zonal necrosis, when present is rather apt to be central or between the centre and the periphery of the lobule.

In this fatty degeneration and autolysis, of the liver, although hemorrhage from the alimentary canal is not infrequent, it would appear that there is little tendency to hemorrhage into the liver itself, thus differing from the lesion found in eclampsia. In some instances, particularly if the condition has

existed for a considerable length of time. the lesion is practically identical with that of acute yellow atrophy. In pernicious vomiting of pregnancy, the kidneys show evidence to a more or less marked degree of degeneration of the epithelium of the convoluted tubules.

The associated urinary findings in these cases of pernicious vomiting are the presence of acetone; diacetic acid, beta oxybutyric acid, indican, a trace of albumin, a few casts and bile pigment. In addition to these there is found abnormal nitrogen ratios, showing a disturbance of proteid metabolism with faulty oxidation.

Eclampsia may be divided into two clinical types, namely, the hepatic type, in which the liver is the organ chiefly involved, and the kidney but little so; and the nephritic type in which the kidney seems to be the organ chiefly affected. Since Schmorl's paper which appeared in 1893, the tendency has been to regard the hepatic lesions in all cases of eclampsia as more characteristic than those of the kidney, and to consider them necroses, either hemorrhagic or anemic, always situated at the periphery of the lobule, and produced, according to Schmorl, by thromboses in the smaller portal vessels.

Cragin does not find, in the material at his disposal, the hepatic lesions in eclampsia as definite or uniform as might be inferred from the writings of the above mentioned German authority. In patients dying from eclampsia of the so-called hepatic type, he found the lesions in the liver very marked, while in those instances of eclampsia of the nephritic type, which ended fatally, the hepatic lesions were found slight, to such an extent even that various pathologists to whom slides were shown, pronounced the liver normal.

The nitrogen partition as it occurred in the urine of four cases of the hepatic type, and five cases of the nephritic type of eclampsia, showed a marked resemblance between the hepatic type of eclampsia and the pernicious vomiting of early pregnancy; namely, ammonia-nitrogen-amido acid, and undetermined nitrogen above normal; urea nitrogen subnormal. Quite often a resemblance was found in the hepatic lesions in the two conditions, namely necrosed cells in the centre of the lobule and cells with fatty degeneration near the periphery. In the nephritic type of eclampsia the nitrogen ratios varied but little from the normal.

PYELONEPHRITIS OF PREGNANCY.

Numerous are the causes of pyelonephritis of pregnancy. Those of a general nature are alcoholism and overwork; the influence of cold and intercurrent diseases, such

as scarlet fever, influenza, small-pox and pneumonia have also been mentioned by a number of writers. The local causes are lesions of the urinary tract, lithiasis, hydronephrosis and diseases of the neighboring viscera, especially affections of the intestine.

Finally there are the obstetrical factors. Pyelonephritis when encountered during the latter part of pregnancy is often due to a compression of one of the ureters, at a time when the uterus has reached a certain size, and it would appear that young women are more particularly prone to this renal complication.

Blanc, in a recent thesis on the subject, published at Paris in 1908, after having pointed out the predisposing causes for the development of this affection, is of the opinion that one should take into consideration traumatism, renal congestion and ordinary retention, whether the latter is due to compression of one or both ureters. He also points out that the dilatation of the ureter is more marked on the right than on the left.

The infection may take place by either an ascending or descending extension, or by the blood; the lymphatic route is rarely followed by the infectious agents. The colon bacillus is the most frequent determining cause, after which come the gonococcus and the streptococcus.

The commencement of the renal infection is sudden, preceded or not by chills, but during the weeks which precede it the urine will be cloudy, micturition is frequent and there are slight febrile attacks which are usually attributed to influenza. This, Blanc terms the presuppurative period. When fully developed, pain in some form is almost always present, either localized in the involved kidney or extending down the ureter to the bladder. The temperature is fairly high and the pulse somewhat accelerated. The headache, rapid loss of flesh and digestive disturbances simulate typhoid fever to a certain extent. The urinary disturbances may be either a polyuria, due to an increase of the arterial pressure in the kidney, or anuria, due to pressure of the fetal head; or a reno-renal reflex.

Palpation of the kidney is painful and difficult, while percussion is sonorous in front of the tumor. By vaginal examination the enlarged and hard ureter can be felt. Catheterizing cystoscopy, by drawing off the urine from each kidney, will show that a certain amount of albumen is present; there is sometimes pyuria and a constant decrease in the urea.

After delivery the affection may get well spontaneously, or become chronic, while in

other cases it will recur with the next pregnancy. When pain predominates the differential diagnosis must be made between hepatic or nephritic colic, salpingitis and very frequently appendicitis; when general disturbances are present the differential diagnosis must be between influenza, typhoid fever, etc. When there is pyuria, renal tuberculosis or cystitis must be eliminated.

The treatment consists in a milk diet and the alkaline waters, combined with mild laxatives and some urinary disinfectant. Lavage of the renal pelvis has also its indications while in severe cases of unilateral pyelonephritis nephrotomy may be required.

THE PROPHYLAXIS AND TREATMENT OF TYPHOID BY VACCINES.

The treatment of various diseases with sera and vaccines gives promise of very remarkable results in the future, and even at the present time much has been accomplished in this respect. As a result of specific inoculation of a large number of men in the British Army, Wright obtained the following results: of 1758 men inoculated, 142 died, in other words 8%; of those who were not inoculated, namely 10,980, under the same general conditions 1800 died, in other words a mortality of 16.6%. The incidence of the disease in the various squadrons was anywhere from two to twenty-eight-fold greater in the uninoculated than in the inoculated. Wright used dead cultures for inoculation, and he believes that two doses should be given to obtain the best results. The only disadvantage of the procedure appeared to be that the inoculation was followed by a short period of extreme susceptibility to infection. Increased immunity is from one to three years in duration.

The experience of the Germans with anti-typhoid inoculation has not been so extensive, but in the main confirms Wright's results. Of 424 typhoid cases only one hundred received inoculation. In the uninoculated the mortality was 11.9 per cent., and 4 per cent. for the inoculated. In the inoculated the disease ran a milder course and relapses and complications were less frequent.

In the treatment of typhoid fever Chantemesse has been the most successful and with his colleagues he has treated one thousand cases with a mortality of 4.3 per cent. Of 5621 patients who were given routine treatment during the same period, 17 per cent. Of those patients who received the serum treatment before the end of the first week not a single death occurred.

The exact nature of Chantemesse's serum is difficult to understand. He refers to it as antitoxic produced by inoculation of

horses with a true typhoid toxin. It does not, however, act directly upon the toxin as does the diphtheria antitoxin, but in some way indirectly. It stimulates the spleen, bone marrow, and other lymphatic apparatus to increased opsonin production. The sicker the individual the smaller must be the dose, lest too many bacilli be destroyed at once. There therefore, would seem to be a strong bactericidal element in the serum. The serum treatment is combined with a cold bath treatment, and calcium chloride is given as a routine measure to prevent hemorrhage.

The results obtained by Chantemesse have to a certain extent been confirmed by German writers, and von Leyden reports three cases treated with antitoxic serum prepared by Meyer and Bergell. These cases were remarkably short, the temperature reaching normal on the sixteenth, seventeenth and nineteenth days respectively. The serum is stated to be of only moderate strength and to be both bacteriolytic and antitoxic. It is well to bear in mind, as has been suggested by von Stenitzer, that an antitoxin, although mild, as in dysentery, may be of considerable service in tiding over critical cases.

Richardson has treated one hundred and thirty-two cases of typhoid products, serum, bouillon filtrates, and the nontoxic residue of the typhoid bacillus as prepared by Vaughan. The results were largely negative with one exception. By continued inoculation during convalescence of the nontoxic residue he had only 5 per cent. relapses when usually these occur in 22 per cent. Richardson is of the opinion that in typhoid fever more favorable results may be obtained if dead bacilli are combined with the filtrate of living cultures, because a combination such as this would approximate more nearly to inoculation with the living organism.

THE TUBERCULAR MENINGO-ENCEPHALITIS OF THE GENERAL PARALYTIC TYPE.

Tuberculosis, which is both an infection and an intoxication, is quite susceptible of exercising an action on the nervous system. For a long the multiple manners of evolution of delirium in tuberculous subjects have been pointed out, likewise the various types of mania and melancholia which may arise in phthisical patients, without any tuberculous meningitis being evident. Recently, Charpentel in a thesis published at Lyons, relates several cases of what appear to be true general paralysis, which may well be attributed to a chronic tuberculous meningo-encephalitis.

The tuberculous meningo-encephalitis and myelitis have only been studied recent-

ly. In 1886 Raynard published a very careful and excellent study on tuberculous myelitis. He demonstrated that the common inflammatory lesions are particularly extensive, while the medullary tubercles appear greatly disseminated. Afterwards, Philippe and Cestan recorded three new cases of tuberculous meningo-myelitis in 1899. On the other hand, Dupre while examining the brain of a tubercular subject presenting delirium during life, found destructive lesions in the cells of the frontal lobe.

Tuberculous infection can produce those chances encountered in ordinary inflammation in the nervous system, without there being any specific histologic elements. This is the important point to which the cases recorded in the past lead, and which end was realized in the recent experiments with certain tuberculous toxins by Delille.

Consequently it would seem evident that tuberculosis may produce certain ordinary lesions, but the question arises as to whether or not during its chronic evolution it can give rise to the special sclerosis of chronic meningo-encephalitis and thus produce general paralysis. Klippel replies in a distinctly affirmative way, and the cases collected by Charpentel in the service of Pierret are particularly convincing.

The type of tuberculosis which appears the most propitious for the development of the paralysis is that having a slow and more or less torpid evolution. This general paralysis has no special symptomatology; the diagnosis can only be made by eliminating the other causes of general paralysis and by the diagnosis of tuberculosis in the patient. However, if the symptomatology is the same in its principal points, there are certain symptoms which nevertheless predominate. Epileptiform ictus and hallucinations of sight appear particularly frequent in tuberculous general paralysis and are often in direct relationship with the acute outbreaks of the tuberculosis. And what is more, complete dementia seems to appear far more early during the progress of the affection and death occurs more rapidly, the debilitating action of phthisis adding its action to the cachexia which belongs to the paralysis. The prognosis is fatal. The treatment, which is rarely successful, should be that of the tuberculosis.

THE ANESTHETIZER DOCTOR OR NURSE.

One by one the prerogatives of the general practitioner are being lost to him. He has surrendered to surgeon, gynecologist and obstetrician, pediatricist and orthopedist, urologist, internist, nose, ear and throat man and oculist. His patients come and

go—to the specialist; he turns them over to the surgeon, gynecologist, et al.

In times past the surgeon would ask him to give the anesthetic; it was a sort of compensation—not financial but professional. But, now, if he assists at all, he stands at arms length—and the longer the arm, the better—from the operative field, faithfully clutching a retractor; this gives him a splendid opportunity to see what is doing, and he is then better able to tell the patient, or the family, what a beautiful operation it was—how successful.

But, what of the anesthetic? Why, the nurse gives that! It has been decided by the management of our greater hospitals that the young medical man is not capable of giving satisfactory anesthetics. He, therefore, is barred the privilege of the anesthetic room; the nurse reigns supreme.

We grant that an inexperienced externe should not under any circumstances be compelled or allowed to give an anesthetic without intelligent supervision. Be it so, he is capable of learning and should be taught.

Take from him the anesthetics, and you rob the young man of one of the important advantages of the hospital training. All will not become experts—that is assured; nor are all doctors good doctors.

Now, on the other hand, the operator should be considered. It is, therefore, easy to understand why he should prefer a well-trained nurse-anesthetizer rather than a raw externe, who no sooner becomes proficient than he is moved on in the service and replaced by another raw man.

As a matter of fact, the present system means that about half the patients operated on are anesthetized by inexperienced men. Obviously, this is wrong—unjust alike to surgeon, patient and externe. To be sure, the training of a competent woman and the endowing of her position with permanency would correct the injustice to the two, the surgeon and the patient; but—what of the externe, the doctor that is to be, the general practitioner? Must he again sacrifice to the specialist?

There is a way to correct the evil—teach the student. Rare is the college that gives practical instruction in anesthesia. It is odd that a subject so eminently practical should be neglected; yet it is so, and the student who goes into practice without the hospital training knows little of the administration of anesthetics.

In all medical centers there are men skilled in anesthetics, who limit themselves more or less the practice of anesthesia. Give the hospital a visiting anesthetist; compensate him if necessary. Create a position on the college faculty for him and let him

teach the student, first by demonstrations, later by actual administrations.

Then if the young man be not competent to anesthetize a patient, he should not be eligible to surgical appointment in the hospitals.

Editorial News Items.

Smallpox in Chattanooga.

A Hamilton County (Tenn.) physician recently reported that there was thirty-eight cases of smallpox in that county, equally divided between whites and negroes. The authorities are making strenuous efforts to stamp out the disease in and around Chattanooga, which is situated in the above named county, and as a result of these vigorous measures, Dr. W. H. Holbrook, of Chattanooga, is being prosecuted because of his failure to report a case of small pox. The doctor diagnosed the case of a street car conductor as chicken pox, and allowed him to continue on his run. To this case, it is alleged, seven others have been directly traced and the health of hundreds of people was necessarily terribly endangered.

Legislature Asked to Provide Antitoxin.

Dr. C. F. Williams, State Health Officer of South Carolina, in his report to the State Board of Health, recommends that the Legislature be urged to appropriate \$5,000 annually to be used in purchasing and distributing diphtheria antitoxin free of charge to all citizens needing it. Dr. Williams believes that this remedy, because of the great expense incurred by its use, is employed in relatively few cases. Its cost places it beyond the reach of the poorer classes. He says further, in his report, and it is truth he speaks, for what he says will apply with equal force to other States, that "we are often handicapped in our efforts to prevent disease by lack of co-operation on the part of physicians. In this connection I will state that it has been impossible for this office to get reports on communicable diseases and vital statistics from many of the physicians in our State, in spite of the fact that they are furnished at the end of each month a blank upon which to make their report and a self-addressed stamped envelope for reply. We have endeavored through several circular letters to impress upon the profession the importance of these reports, indicating to them that only by this means will we be in a position to know where to direct our efforts and to see what is being accomplished thereby. I am now convinced that these reports will never be completed until they are made so by legal requirements. I would therefore recom-

mend that your board urge the legislature to enact a law compelling physicians to make these reports and provide a penalty in event of their failure to do so."

Physician Accused of Murder.

Dr. T. A. Jones, one of the most prominent physicians of East Lake, Ala., was arrested December 19th, on a charge of murder. The arrest is the result of an investigation by the coroner into a death which occurred December 1st under rather suspicious circumstances. The doctor's certificate gave the cause of death as gastritis, but a chemical examination of the stomach contents showed the presence of arsenic and the chemist's report claims that enough of this poison was present to kill five men. The daughter of the dead man was also arrested. It is said that large insurance policies were carried by the deceased in her name. The husband of this woman died in September and Dr. Jones pronounced his death to have been caused by gastritis also. We have not yet heard the result of the stomach analysis in this case.

Delgado Memorial Hospital.

On December 19, 1908, the new Delgado Memorial Hospital, a part of the Charity Hospital of New Orleans, was formally opened and dedicated with impressive exercises. It is a handsome five-story, steel frame structure, erected and equipped at a cost of \$200,000 by Mr. Isaac Delgado as a memorial to his uncle and aunt, Samuel and Virginia Delgado. It is intended and equipped for the surgical department of the Charity Hospital and is now the property of the State of Louisiana with no further expense than its maintenance.

The structure is strictly fire-proof and probably one of the most modern hospitals in existence, both as regards plan and equipment.

The exterior design is an adaption of the French Renaissance with light gray brick and white terra cotta.

The first floor is given over to the receiving and distributing departments, as well as a very beautiful chapel for the use of patients of the hospital irrespective of their religion. Second, third, and fourth floors are typical ward floors containing three beautiful, light, airy wards and diet kitchen, dining room, treatment and examination room, bath and toilet. The top floor is devoted entirely to operating rooms and the necessary sterilizing, anaesthetizing and recovery rooms, and a large bandage and dressing room with store room.

Special attention has been given to the sanitary features of this hospital, and both its plumbing and its system of heating and

ventilating is the best known to modern science.

The corner stone was laid by Mr. Delgado on June 20, and the building was completed on Nov. 5, 1908.

During the past fifteen or twenty years surgery has so developed and extended its field that the surgical wards of the Charity Hospital have been severely taxed and congested, and there always has been a long line of applicants who wished to come in at the very first opportunity. The erection of this handsome building will relieve this condition.

Everything about the building is the most modern and best that could be devised. It is cheerful and agreeable, and except that the patients lie in great rooms together and not in private rooms it exceeds in comforts for the sick many of the homes of the wealthy.

Thirteenth Annual Banquet of the Buncombe County Medical Society.

The thirteenth annual banquet of the Buncombe County Medical Society was held at the Battery Park Hotel, Asheville, N. C., on the evening of December 21st. Covers were laid for sixty. In many respects it was one of the most notable banquets this most excellent county society has held. Dr. Wm. Leroy Dunn presided as toast-master. An elaborate menu was served, and with the concluding course came several short but witty and brilliant speeches from those arranged for the regular program speeches. Dr. Dan Seveir, the retiring President; Dr. Martin L. Stevens, the President-elect; Dr. John Hey Williams, Dr. Carl V. Reynolds, Dr. W. C. Brownson, Dr. J. G. Anderson, Dr. Paul Paquin, Dr. Chas. L. Minor, Dr. C. P. Ambler, Dr. H. B. Weaver. Notable among the invited guests were Dr. J. Howell Way, Judge J. H. Murphy, Hon. Phil. Cocke and Gov. Locke Craig, each of whom made short addresses. The following officers-elect will serve the Society for 1909:

President, Dr. Martin L. Stevens, Asheville; Vice-president, Dr. Clyde E. Cotten, Black Mountain; Secretary, Dr. Gallard S. Tennent, Asheville; Treasurer, Dr. Thos. E. W. Brown, Asheville. Delegates to State Society: Drs. John Hey Williams and A. W. Calloway. Alternates: Drs. E. R. Morris and W. C. Brownson.

The Southside Virginia Medical Association

This association met at Emporia, Va., Dec. 8th. It was the twenty-third session, and comprises the counties of Surry, Sussex, Prince George, Southampton, Dinwiddie, Greeneville and the city of Petersburg.

Their programme was interesting and elaborate, and many of the papers were ably discussed. Several prominent physicians from Richmond, Norfolk, and other cities throughout the State were in attendance.

The following well known physicians contributed papers: Dr. Joel Crawford, of Yale, Va.; Dr. B. L. Hillsman, of Richmond, Va.; Dr. O. G. Wright, of Jarrett, Va.; Dr. E. W. Murrell, of Richmond, Va.; Dr. G. W. Astrop, of Surry, Va.; Dr. Shelton Horsley, of Richmond, Va.; Dr. T. M. Raines, of Wakefield, Va.; Dr. Joseph A. White, of Richmond, Va.; Dr. J. Allison Hodges, of Richmond, Va.; Dr. George Ben Johnson, of Richmond, Va.

The following are the officers of the association: President, Dr. L. Lofton, Emporia, Va.; First Vice-President, Dr. W. B. Barham, Newsoms, Va.; Second Vice-President, Dr. S. H. Moseley, Ebony, Va.; Third Vice-President, Dr. J. G. Reunie, Petersburg, Va.; Fourth Vice-President, Dr. G. W. Astrop, Surry, Va.; Treasurer, Dr. O. G. Wright, Jarrett, Va.; Recording Secretary, Dr. E. F. Reese, Courtland, Va.

The Chattanooga and Hamilton County Medical Society.

On December 5th this society held quite an interesting meeting. The subject for discussion was "Diet for Typhoid Fever Patients." The discussion was lengthy, and very intelligent. Those who took a part in the discussions were lead by Drs. West, Wise, and Wallace. The meeting was held in the chamber of commerce. Dr. T. E. Abernathy presided.

Dr. E. R. Michaux, of Greensboro, N. C., who has been medical director of the Security Life and Annuity Company for the past four years, has resigned the position, and will resume the practice of medicine. Dr. Michaux is known as one of the leading physicians and surgeons of the State, and is regarded as a very popular practitioner. He is succeeded by Dr. J. P. Turner.

Columbia Hospital Changes Management.

The Board of Directors of the Columbia Hospital, Columbia, S. C., which is composed of the most prominent ladies of that city, has recently decided to turn the affairs of the hospital over to business men. Their action is based upon several reasons, chief among which was the lack of interest which has been shown in the work of the hospital and the lack of financial assistance on the part of the city. The property is valued at \$75,000, is fully paid for and unencumbered by debt of any kind.

Doctor Indicted on Criminal Charge

Dr. R. A. Thaggard of Birmingham, Ala., has been arrested on the charge of having caused the death, one year ago, of a young woman in the performance of a criminal operation. At that time the doctor was arrested, but the grand jury failed to return a true bill against him. Lately the coroner claims to have come into possession of new evidence, and upon the strength of this the physician was rearrested. His bond was fixed at \$1,000 which was immediately given.

Doctor Bush Receives Appointment

Dr. Chas. F. Bush of Thomasville, Ala., has been appointed by Governor Comer to the important position of State Cotton Mill and Prison Inspector, to succeed the late Dr. Shirley Bragg. Dr. Bush is only thirty-two years of age, but is well fitted for the office to which he has been appointed. The salary is \$2,400 per annum and all traveling expenses. Residence of the incumbent in Montgomery is required and the term of office is four years. Dr. Bush graduated from the medical department of the Vanderbilt University, after which he spent some time doing special work at the Johns Hopkins University.

Contagious Disease Ordinance Defined

The police court of Chattanooga, Tenn., has had occasion recently to define the city ordinance as to the placards posted on houses to quarantine against contagious diseases. Dr. Edwin B. Anderson of that city was arraigned for tearing down a "diphtheria" placard placed by the health authorities upon his reporting a suspicious case of sore throat. The sign was posted five days after his report, and when he considered all danger past, he removed the poster and sent word to the health department to fumigate the house. The law was technically violated in that it is required that a city official must remove these signs, and the judge declared the doctor guilty of technical violation, but refused to impose a fine because of the spirit shown by the physician in taking all precautions to prevent the spread of the disease. The prosecution was the result of petty-spite work on the part of the clerk of the board of health.

Mississippi Doctor Wounded.

Dr. W. E. Moody, a prominent physician of Lake, Miss., was shot and seriously wounded, Dec. 15, by a merchant of that place. The bullet entered near the collar bone on the left side, took a downward course, penetrated the lung and emerged near the opposite shoulder. Dr. Moody was resting comfortably at last account. The

trouble arose over an old account carried against the doctor on the books of the merchant.

Physician Granted Gubernatorial Clemency.

Dr. T. C. Burch, of Wilkes county, Ga., convicted in 1905, of having killed a man, and sentenced to serve a term of imprisonment, was recently pardoned by Governor Hoke Smith. It has been subsequently shown that Dr. Burch had been rendered morally irresponsible by stories told him by the mother-in-law of his victim, which led him to believe that the slain man had invaded the sanctity of his home.

Atlanta City Physicians.

The City Fathers of Atlanta, Ga., have recently decided to change the system in regard to city physicians which has for a number of years prevailed. The new law provides that the Board of Health shall elect two city physicians, who shall be paid a salary of \$2,000 a year, and who shall be required to give their entire time to the city's work. These physicians are to be chosen by a commission of three appointed by the mayor from the Grady Hospital Board. Hitherto Atlanta has employed eight physicians, one for each ward, at salaries ranging from \$500 to \$1,000 and at a total cost of \$5,200. With the addition of two new wards, two additional physicians would have become necessary under the old system. The ordinance goes into effect in July of this year. The two physicians will be known as assistant health officers and will have offices and headquarters in the city hall with the board of health department, where they can be reached at any time during the day.

Dr. Warren Young, formerly of New Iberia, La., has been elected physician-in-charge of the Fenwick Sanitarium at Abbeville, La.

Dr. J. T. Longino, a graduate of the Southern Medical College, Atlanta, Ga., class 1893, on Dec. 23, '08, received the nomination for the office of mayor of his town, Fairburn, Ga. We wish the doctor success.

Dr. C. W. Groetsch has been made assistant coroner of the city of New Orleans. Dr. Groetsch is a young man, but he is rapidly forging to the front. He graduated from the Medical Department of Tulane University, in 1903.

Governor Noel, of Mississippi, has appointed Dr. J. W. Crumpton, of Starkville,

to fill the vacancy on the Mississippi State Board of Health, left by the unfortunate death of Dr. Sturgis, mention of which is made elsewhere in these pages. Dr. Crumpton is one of the ablest physicians in his State. He was graduated from the Medical Department of the University of Tennessee in 1883.

Physicians Aid Poor.

Twenty-seven physicians already have been appointed to assist at the free clinic of the Louisiana Anti-Tuberculosis League, the list comprising experts in all the various departments. The clinical work has been divided into classes, as follows: Medical, male; medical, female; medical, children; throat, genito-urinary, stomach, eye, skin, nerves, orthopedic and surgical.

Montgomery County Medical Society.

At a recent meeting of the Montgomery County (Ala.) Medical Society, the annual election of officers resulted in Dr. James N. Baker being made President of the organization; Dr. W. A. Sellers, Vice-President, and Dr. P. S. Mertins, Secretary and Treasurer.

In addition to these officers, Dr. F. C. Stevenson was elected to the Board of Censors to fill the vacancy caused through the death of Dr. Shirley Bragg. Dr. H. T. Lay was elected as County Physician, and Dr. Glenn Andrews elected as County Health Officer.

In the case of both Dr. Lay and Dr. Andrews, the terms of office, formerly extending but for one year, was changed to two years. In the matter of the secretary and treasurer of the society, a change was also made.

Fulton County Medical Society.

At the regular meeting of the Fulton County (Ga.) Medical Society, held December 18, the following officers were elected for the ensuing year:

President, Dr. Cyrus W. Strickler; vice-president, Dr. J. Ross Simpson; secretary, Dr. Edgar G. Ballenger; treasurer, Dr. A. H. Lindorme; censor, Dr. Michael Hoke.

Dr. Dunbar Roy and Dr. Hugh M. Lokey were appointed to arrange for the annual banquet.

Trained Nurses Graduate.

Twenty-one young ladies graduated recently as trained nurses from the Charity Hospital Training School, in New Orleans, Louisiana. The opening address was delivered by Dr. E. S. Lewis, which was followed by the report of Sister Agnes, directress of the institution. Dr. J.

M. Batchelor as chairman of the faculty also read a report. Dr. Isadore Dyer delivered the address to the graduates saying many things of interest to the young ladies.

The young ladies who graduated were: Mrs. Bertha M. Addison, Texas; Miss Mary A. Armstrong, Alabama; Miss Gusie M. Berthand, Louisiana; Miss Anne A. Davis, Texas; Miss Lois Barrette Etheridge, Miss Ida M. Franklin, Arkansas; Mrs. Maude E. Gartner, Louisiana; Miss Bertha F. Goepf, Texas; Miss Carrie C. Herring, Mississippi; Miss Roxanna Holtshouser, Mrs. Stella P. Kays, Kentucky; Miss Katherine E. La Mar Ohio; Miss Mary Josephine Luckett, Mississippi; Miss Dorothea M. Machauer, Miss Pauline H. Menge, Miss Bertha D. Morrison, Louisiana; Miss Nina M. Nye, Mississippi; Miss Adeline Smith, Miss Martha L. C. Tau, Louisiana; Miss Lillian White, Georgia; Miss Marie Louise Wilcox, Louisiana.

Tuberculosis Sanitarium.

Dr. G. G. McConnell, of Washington, medical examiner-in-chief of the Knights of Pythias, has announced that it has been formally decided that a sanitarium for Pythians unfortunate enough to be sufferers from tuberculosis shall be established in New Mexico. The cottage and other buildings, when sufficient funds have been collected from members of the order, will be erected on a large tract of land near Los Vegas, donated for the cause by New Mexico lodges.

Addition to Infirmary.

The new wing recently erected adjoining Providence Infirmary at Mobile, Ala., was formally opened December 8, 1908. An elaborate program was carried out.

The wing was made necessary by the great increase in the number of patients and it was added at a large cost. It contains many rooms and relieves the congested conditions which have hitherto existed.

The Telfair Sanitarium.

Greensboro has a number of medical institutions which are worthy in all respects, and among these none stand higher than the Telfair Sanitarium (Inc.). This institution is located at Glenwood Park in Greensboro, N. C., and is prepared to treat nervous and mental diseases, alcoholism and all drug addictions. The beneficial results that may be obtained in cases of this character by the means of constant personal observation, and the gradual restoration of the patient's impaired nervous system, through the medium of reconstructive tonics supplemented by the use of such electrical treatments as may be demanded by the in-

dividual requirements of the patient are not to be questioned. The Telfair Sanitarium has every modern facility for the treatment of such cases by most up-to-date methods. Its success, even in most obstinate cases, as been thoroughly demonstrated and above all the methods employed are entirely in conformity with the ethics of medicine.

The management of this institution having the fullest confidence in the efficacy of the Telfair treatment, which is warranted by the results obtained in a large number of cases, and being aware of the skepticism of a large number of the medical profession regarding the so-called "cures" at all times invites investigation. The difficulty of treating these patients in their own homes is conceded, as few physicians in general practice can afford to give the necessary time to the accomplishment of a permanent cure; therefore, the question of a sanitarium is generally considered. This should be decided with care, if the desired benefit is to be obtained. The Telfair Sanitarium affords the constant attention of a trained specialist, and the pleasant surroundings are an essential aid towards the patient's recovery.

Dr. W. C. Ashworth, the resident physician will be glad to answer any or all inquiries.

Jefferson County Medical Society.

The annual banquet of the Jefferson County (Ala.) Medical Society was held on the evening of December 28, 1908, in Birmingham. Dr. J. D. Heacock, recently elected President of the Society, was toastmaster for the occasion, and a number of pleasant toasts were responded to by prominent physicians and others. This Society is one of the most progressive of the kind in Alabama.

New Physician for Charlotte.

Dr. J. W. Young, of Spencer, on the first of the new year removed his residence to Charlotte, N. C. Dr. Young practiced medicine in Spencer for 11 years with great success and he will be given a cordial welcome in the medical fraternity of Charlotte.

Negroes Hold Antituberculosis Congress.

The National Negro Anti-tuberculosis Congress was held at Tuskegee, Ala., December 14th to 19th under the joint auspices of the Tuskegee Industrial Institute and the National Association for the Study and Prevention of Tuberculosis. The Congress was largely attended by representative negroes from all sections of the United States. Addresses were made by speakers from many Southern cities and a special exhibit on the effects of tuberculosis was a particularly valuable educational feature

Dr. J. M. Lanham, one of South Carolina's most prominent doctors, has suffered a stroke of paralysis and is ill at his home near Cavins. The attack came on during the last days of December, 1908.

Dr. J. C. King has recently been appointed Superintendent of the Southwestern State Hospital at Marion, Va., to succeed Dr. A. S. Priddy, who recently resigned on account of ill health. Dr. King is well qualified for this position, having served for a number of years as assistant Superintendent.

At a recent meeting of the Church Hill Medical Society, Richmond, Va., the election of officers for the ensuing year resulted as follows; Dr. B. A. Hord, president; Dr. C. W. Massie, first vice-president; Dr. George W. Gay, second vice-president, and Dr. R. D. Garcin, secretary-treasurer. The executive committee was composed of the following: Drs. W. S. Beasley, W. H. Parker and J. S. Horsley.

Marriages.

Dr. L. R. Kirkpatrick, of Maxton, N. C., and Miss Sara Crosland, of Bennettsville, S. C., were united in marriage Dec. 23, 1908, in Bennettsville. Dr. Kirkpatrick graduated in 1902 from the North Carolina Medical College and has succeeded in building up an enviable reputation as a physician. The doctor and his wife are now at Maxton after having spent their honeymoon in western North Carolina.

Dr. Alvin Sweeney, of Lake Arthur, La., and Miss Rilla Ingram, of Wichita Falls, Texas were married Dec. 2, 1908, in Lake Charles, La.

Dr. Granville Eastham, of Twyman's Mill, Va., was married Dec. 22, 1908, to Miss Mary John Tinsley at the home of the bride in Culpepper county, Virginia.

Dr. Frank M. Leslie, of Staunton, Va., was married at Roanoke, Va., Dec. 23, 1908, to Miss Alice J. Wall, of Roanoke.

Dr. James Boyce Elliot and Miss Jennie Roberta Thornwell were married Dec. 15, 1908, at the home of the bride's parents in Rock Hill, S. C. Dr. Elliot is a popular and progressive young physician of Rock Hill.

Dr. Hugh Henry Trout, of Roanoke, Va., and Miss Leonora Cocke, of Hollin's Institute, were married recently at the latter place. Dr. Trout is a prominent physician of Roanoke, where he and his bride now reside.

Dr. Ernest P. E. Sengstak and Miss Effie K. Snider, both of Jacksonville, Fla., were quietly married recently in Jacksonville. Dr. Sengstak is a graduate of Baylor University College of Medicine, Dallas, Texas, class 1905, and he occupies a very high position in both the social and professional life of his city and State.

Dr. Lawrence Orr McCalla, of Eatonton, Ga., was married Dec. 2, 1908, to Mrs. Bessie Allen, of Starr, S. C. The ceremony took place at the home of the bride in Starr. The couple are now making their home at Eatonton, Ga., where the groom enjoys a large and lucrative practice. Dr. McCalla is a graduate of the Baltimore College of Physicians and Surgeons, class 1893.

Dr. A. H. Bower, of Gold Hill, N. C., and Miss Pearle Lingle, of Faith, N. C., were quietly married Dec. 24, 1908, at the home of the bride. Dr. Bower, a graduate of the University College of Medicine, of Richmond, class 1906, enjoys a splendid practice at Gold Hill, where he and his bride will reside.

Dr. T. A. Tatum, a prominent physician of West Point, Ga., and Miss Ruby Elwood Whitaker were recently united in marriage at the home of the bride's parents in Davisboro, Ga.

Dr. Reuben Jesse Washington and Miss Maggie Frazer were recently married at Montgomery, Ala., the ceremony being performed at the home of the bride.

Dr. Harley Roseborough Shands and Miss Bessie Webb Nugent, both of Jackson, Miss., were united in marriage Dec. 9, 1908. Dr. Shands is a young physician of great promise. He graduated from the Medical Department of Tulane University in 1905.

Dr. Geo. K. Pratt, Jr., of New Orleans, was married recently to Miss Nina Larousini, also of New Orleans. The groom is the son of Dr. Geo. K. Pratt, is a graduate of Tulane University Medical Department, class 1906, and stands high in the social life of his native city. The couple will live in New Orleans.

Dr. Thos. Coleman Hodge and Miss Bessie Dobbs were united in marriage January 6, at the home of the bride in Atlanta.

Dr. Will Harrell and Miss Eunice Varnon, both of Pleasant Hill, Ala., were recently married in Selma, Ala., at the home of the bride's brother. They will live at Pleasant Hill.

Dr. Thomas Mitchell Berry, of Bolivar county, Miss., was married recently to Miss

Maggie Pugh Woods, of Terrebonne Parish, La. The wedding was a quiet affair. Dr. Berry and his bride will reside at Shaw, Miss., where he has been located since his graduation.

Dr. H. C. Armstrong, of Silver Creek, Miss., and Miss Annie Freeman, of Hazelhurst, Miss., were united in marriage Dec. 10, 1908, at the home of the bride. Dr. Armstrong is a leading physician of Silver Creek. He graduated from the Louisville Medical College in 1904.

Dr. Richard Porter Taylor and Miss Beatrice Erma Little, both of Jacksonville, Fla., were recently married in that city.

Dr. Benjamin W. Inman, of Williamson county, Miss., and Miss Gertrude Ozenne, of New Orleans, were married recently in New Orleans.

Deaths.

Dr. C. G. Cannady, one of the most prominent physicians and surgeons in Virginia, died at his home in Roanoke, Va., Dec. 17th. He was 48 years old. Heart disease was the cause of his death. He was a native of High Point, N. C., and was a son of the late Dr. A. H. Cannady. He graduated at the College of Physicians and Surgeons, of Baltimore, and the Hospital Medical College, of St. Louis. He was a well educated physician, he studied several years in Vienna. Dr. Cannady established the Rebekah Sanatorium in Roanoke, the first hospital that was ever built in that city. At one time he was president of the Roanoke Academy of Medicine, ex-president of the Southwest Virginia Medical Association. He was a member of the American Medical Association.

Dr. T. S. Richardson, a prominent physician of Sturgis, Miss., and a graduate of the Memphis Hospital Medical College, class 1902, was fired on by an unknown assassin and killed on the night of Dec. 24, 1908. Dr. Richardson was 33 years of age and was a member of the State Board of Health.

Dr. Samuel Reed Dunn, one of the most noted physicians of Mississippi, died at his home in Greenville December 21, 1908, of heart disease. Dr. Dunn was a graduate of Jefferson Medical College, class 1867, and was sixty-one years of age. He was for forty years a prominent figure in the professional, social and business life of his home.

Dr. William B. Moore died Dec. 25, '08, at his home in Tuscumbia, Ala., after a

lingering illness of several months. Dr. Moore formerly resided and spent the greater part of his life at Riverton, Ala.

Dr. A. S. Pitts, a prominent physician of Hazelhurst, Miss., was shot and killed instantly in his office by a dentist of the same place in a difficulty which arose over some trivial matter. Dr. Pitts graduated in 1883 from the Medical Department of Tulane University; he was fifty-two years of age. His murderer has already been tried and sentenced to imprisonment for life with the condition attached that no effort can ever be made to procure his pardon.

Dr. Jno. P. Long was found dead in his office in Memphis, Tenn., Dec. 19, 1908. He had committed suicide by asphyxiation.

Dr. J. B. Luckie, a resident of Birmingham, Ala., passed away Dec. 12, 1908, after a lengthy illness. Dr. Luckie was seventy-five years of age. He moved to Birmingham from Montgomery in 1872 and went through the cholera epidemic in that year, and gave his assistance to those who suffered.

He served in the State Senate and practiced surgery and medicine in Birmingham for many years, retiring from active practice only a short while ago.

The deceased was a member of the United Confederate Veterans, Camp Hardie, also of the medical association and the Masons.

The Jefferson County Medical Society adopted resolutions to his memory.

Dr. Robert William Nelson, for many years one of the most prominent men in the medical profession of Virginia, died of apoplexy at his home in Charlottesville, Va., Dec. 22, 1908, at the advanced age of eighty-seven. He graduated in medicine from Jefferson Medical College, Philadelphia, in 1846, and practiced his profession for several years in Powhatan and Goochland counties. He moved to Charlottesville in 1868 and up to ten years ago was actively engaged in the practice of his profession.

Dr. J. S. Nowlin, widely recognized as one of the most talented physicians in Tennessee, died at his home at Shelbyville, Dec. 29, 1908, after a lingering illness, aged 70 years. Both as a practitioner and a medical instructor Dr. Nowlin stood among the foremost in the State, and his contributions to medical literature have attracted considerable attention. His death is deeply regretted by a large circle of friends.

Dr. Ira E. Shute, a prominent physician of Opelousas, La., died at his home in that city, Dec. 4th, 1908, after an illness extend-

ing over a period of several weeks. He was fifty-eight years of age, and was a graduate of the University of Louisville, class 1873.

Dr. A. A. Tuggle.—After a lingering illness, Dr. Albert A. Tuggle died Dec. 24th, 1908, at his home in LaGrange, Ga. Dr. Tuggle was a graduate of Atlanta Medical College, class 1890. He was a physician of great ability and ranked high in his profession.

Dr. Cullen M. Collangen, a graduate of Memphis Hospital Medical College, class 1900, was murdered at Trague, Tenn., Dec. 7th, 1908. A feud of several years standing is believed to be responsible for his death. His assassins are under arrest.

Dr. James W. Tankard, of Lillian, Northumberland county, Va., died Dec. 31, 1908, in Baltimore, aged sixty-two years. Dr. Tankard graduated in 1869 from the Washington University School of Medicine in Baltimore and was esteemed as one of the most cultured and prominent physicians in Virginia.

Dr. Sam H. Hicks, of Shreveport La., was shot and killed in that city Dec. 29, 1908.

Dr. J. D. Heathman, a popular practicing physician, of Mooresville, N. C., died December 18th, at Dr. Long's Sanatorium, Statesville, N. C. Dr. Heathman was a native of South River, Rowan county, at which place he was buried. Dr. Heathman was 40 years old.

Dr. Burckhalter, a well known physician of Columbia, S. C., and proprietor of the Alma Sanatorium, died December 13th. Dr. Burckhalter had been ill for several months, but had kept up his work until six weeks prior to his death. Bright's disease was the cause of his death. Dr. Burckhalter was 39 years of age, and had resided in Columbia eight years. He moved there from Greenwood, S. C. He was born in Edgefield county, and was educated in Furman University, and the University of Virginia. He was held in high esteem by his friends and associates, not only in Columbia, but all over South Carolina. His death is a great loss to the medical profession of that State.

Dr. J. P. Houston, a well known physician of Clebourne county, Ala., was killed by a train on December 6th. The approach of the early morning passenger train frightened his horse, which ran in front of the train. The doctor was killed instantly.

Review of Southern Medical Literature

New Orleans Medical and Surgical Journal, November, 1908.

Subacute and Chronic Joint Diseases

Non-Tubercular.—Dr. E. S. Hatch believes that in the treatment of this type of arthritis, that first of all the usual rheumatic remedies, such as salicylates and the ever present Hot Springs trip are absolutely contraindicated, and likewise is the old-fashioned rheumatic diet. These patients are generally in a more or less debilitated condition, and it has been his custom to put them as soon as possible on a full nourishing diet, with plenty of fresh air and sunshine, and lately he has been using the method advocated by Dr. Hoke, namely, the fermented milk diet, the idea being that these patients need an excess of lactic acid and the lactic acid ferments to work against the intestinal putrefaction, which is thought to be at least one of the causes of this disease. He has not had any patient on this diet long enough to be able to say whether it has given better results than the other methods, but Dr. Hoke has certainly reported some very remarkable results from this diet.

Coming then to the local treatment, the keynote is stimulation, and the methods usually employed are hot air baths, electric light baths, massage and vibration. If there are many joints affected, the hot air full body bath is to be preferred, but usually the patients have the various joints bathed separately, followed by massage or vibration. Dr. Peckham has recently reported in a very interesting article some excellent results from the use of electric light body baths followed by a cold water sponge, and general and local vibration, in this type of disease.

The Clinical Significance of Growing Pains in Children.

—Dr. W. W. Butterworth says that normal growth of the body in the infant or child is ever a painful condition, is open to serious doubt, and from the pediatrician's point of view, should never be considered. Therefore, it is important and necessary that the true character of these indefinite pains should be ascertained and a careful examination will almost always disclose that they may be grouped as follows:

First. Myalgia or fatigue pains are due to over-exertion. They are inconsequential.

Second. Pain due to a neurosis of a joint and confined mostly to the large joints.

A third group is due to a slight separation of the epiphyses from the shaft and incomplete fractures about the joint.

In a fourth group are the epiphyseal pains, occurring in malarial and typhoid

fevers and seen during convalescence from the infectious fevers.

Fifth. An epiphysitis, due to disturbances of nutrition and met with in anemia, lues, rickets and scurvy.

The referred pains of flat-foot, poliomyelitis and hip-joint disease, constitute another division.

Sixth, and of special importance because of the destructive tendency of their lesions, are the epiphyseal and osseous pains, seen in osteomyelitis and tuberculous conditions of bones and joints.

Finally, there is the larger group of cases of indefinite pains, which are often the only objective symptoms of rheumatic fever, as it occurs in children.

Indicanuria in Childhood.—Dr. E. D. Fenner follows the lines laid down by Ratchford in the management of recurrent vomiting, which is usually associated with acetoneuria. He simplifies the diet as far as possible, prohibiting or reducing very greatly the meats and all sorts of sweets, and where it is possible and the child will take it readily, he attempts to replace sweet milk by buttermilk, at least for a time. The medicinal treatment consists in the administration three or four times a day of some intestinal antiseptic. Probably in the majority of these cases a dose of calomel and soda is a good thing to start with, and after this he employs a mixture of salicylate and benzoate of soda, gr. $\frac{1}{2}$ -1 of the salicylate and gr. 4-10 of the benzoate, three times a day. In a good many cases, for a while at least, he uses along with this a powder containing gr. 1 of mercury with chalk and grs. 3 of bicarbonate of soda. In the majority of cases he has found it advisable to follow this treatment by a course of some bitter tonic, using now the bitter wine of iron, now the co. syr. hypophosphites, and again a combination of hydrochloric acid, nux vomica, and essence of pepsin, and in some instances, particularly where the breath was offensive, he has found that small doses of chlorate of potash internally would be followed by more improvement than anything else.

The American Practitioner and News, Nov., 1908.

The Value of Food Preservation.

—Dr. H. L. Harris says the assertion is frequently made that borax or boric acid can be used to restore tainted meat to a normal condition, or used to utilize inferior, stale, inedible material. Such assertions, however, are not based upon facts. Boron compounds are not disinfectants, and under no circumstances could they be used to restore meat, fish or fowl, to an edible condition after it

has become tainted, nor can they be used to utilize waste or inferior material. They are used merely for protective measures, and to keep food in a healthful, sweet, hygienic condition. Meat treated with borax is not attractive to flies, therefore meat so treated is protected from the filthiest, most dangerous and most common disease-spreading insect that infests the country.

The advantage of boron compounds over salt for preserving meat is that one pound of borax or boric acid will preserve meat better than six pounds of salt, and boron compounds do not alter the flavor of the meat as salt does. Salt causes a perversion of tastes, and an amount such as is necessary to preserve meat certainly introduces into the system a surplus amount, which overtaxes the kidneys to remove it. There is no doubt that many cases of derangement of the kidneys can be traced to the excessive consumption of salt.

Over-Feeding of Children.—Dr. P. H. Barbour believes that nature handles the problem of over-feeding in one of three ways. First, the excess is eliminated through an increased diarrhoea; second, there is a loss of appetite; third, vomiting ensues. By watching carefully for one or the other or all of these symptoms a physician will be able to prevent evil consequences by diminishing the amount of food before harm has resulted. As a very general rule we may say that the amount of liquid food which the child can use to advantage should not exceed one-tenth of its weight. A pint of milk should be the daily ration of the child weighing ten pounds.

An Old Form of Conjunctivitis.—Dr. S. B. Hays gives the following treatment for conjunctivitis due to diplo-bacillus of Morax-Axenfeld: Keep a clean conjunctival sac and apply zinc to the conjunctiva. This can be done by a collyrium of zinc sulphate gr. i to the ounce, and boric acid gr. x to the ounce of water. Some eyes tolerate drugs better than others, as one patient will be sensible to a quarter grain, while others can accept two grains of zinc. Best results are obtained by giving the strength the patient at hand can stand. This can be told by your standard zinc solution in your office, making the strength of the prescription according to the tolerance of your office solution. Zinc over two grains to the ounce in strength does no more good. A zinc solution to follow the collyrium is preferred by many instead of combined with it.

Texas Medical Journal, November, 1908.

The Regulation of the Social Evil in our Large American Cities.—Dr. G. F. Lydston says that the most that is practicable in dealing with the social evil is to

prevent prostitutes from flaunting themselves before the public gaze. Any custom that makes their trade conspicuous is deleterious to the welfare of society, and should be promptly suppressed. The nymphs of the pave should be given their choice between the seclusion of the bagnio and honest labor. There must, however, be some provision or opportunity for honest labor. If such poor creatures are driven off the streets, there are but two possible avenues of escape open to them: the bagnio, which is already full to overflowing, and the river. They must live; and to drive them off the streets permanently is likely to result in starvation. To demand that they live respectable lives without giving them any opportunity to do so is about as logical as the advice I once heard a young hospital interne give a consumptive patient in the Blackwell's Island Penitentiary Hospital. He said: "My friend, what you need is a trip to Colorado."

Virginia Medical Semi-Monthly, Nov. 13th, 1908.

Indications for and Selection of Local

Anesthetics.—Dr. L. Gwathney says that Mitchel, in Bryan's or Buck's surgery, gives the doses of cocaine for spinal analgesia as follows: (1) lower extremities, 15 mgm.; (2) to sterium, 20 mgm.; (3) upper extremities, 50 mgm.

The technique is simple. The patient is prepared as usual, but not fasting, a glass of milk, wine, or cup of coffee being taken, and a hypodermic of morphia gr. 1-8 to 1-4 given one-half hour preceding. The best position is patient sitting with shoulders bent forward; if unable to sit, the lateral bent position can be used, but must be changed to get uniform analgesia. After scrubbing and making sterile, a small nick in the skin will enable the needle to enter with less pressure. A point one-half inch to one side of center and just above line between iliac crests is selected. After the needle is introduced from one to three inches, depending on the subject, the wire in needle should be withdrawn just before the dura is reached and the flow of spinal fluid marks the termination of the puncture. After the withdrawal of the amount of fluid decided it can be used as a diluent of the agent if desired, though there seems but little to be gained if we are using the isotonic solution. The syringe is attached and the agent introduced. The patient should continue sitting a minute or two and should then lie down. Should high anesthesia be desired the hips are elevated. The operative field is now prepared and

with this completed the analgesia is usually complete. All forms of operations are done with this method from breast amputation all through the abdomen and to the lower extremities. Ryall prefers the method in prostatectomy of old men, and all claim much less shock by the nerve blocking in all types of operations.

The Southern Practitioner, November, 1908.

Deep Complications of Gonorrhoea.—

Dr. J. W. Handly believes that spermato-cystitis, or seminal vesiculitis, seems to be the most persistent of complications. The acute form is treated on the expectant plan, relying largely upon hot enemata, salines and the essential oils, sandalwood, cubebs, etc., for their soothing effect on the inflamed urethra. All local measures should cease until the acute symptoms subside. For the chronic form, Fuller and others adhere to "stripping," or "milking" the vesicles at intervals of two to three days—together with general treatment. Lately, for the most persistent forms drainage of the vesicles is done, but the operation is so extensive that few cases will submit to it. This operation is performed along the lines of the Kraske operation, necessitating extensive dissection before the vesicles are reached. A number of cases are reported where gonorrhoeal rheumatism has been cured by drainage of the seminal vesicles. Any operation for complete drainage is a serious one and necessitates confinement to bed for several weeks.

Melancholia.—Dr. H. Padgett points out that after the incipient stage of melancholia has passed and the disease becomes fixed the symptoms change. The condition now is one of a fixed, intense depression with a decided delusive tendency. In this stage of intense, fixed depression he has seen patients smile and appreciate the comic and then immediately lapse into that awful darkness again. His judgment now has given away. His whole mind is concentrated on his mental distress. When the patient first began he had that vague feeling of having done something wrong that now blossoms into a firm belief that haunts him day and night, as some unpardonable sin and unworthiness. Everything is wrong with him. He is being punished for his sins, and that punishment will continue eternally. Now is one of the most dangerous times, in that he has thoughts of suicide. Often there is a certain amount of motor agitation, the patient walking the floor, wringing the hands, with the feelings of utmost despair. Hallucinations do or rather can occur, but not until the pronounced or advanced stages, and are not characteristic of the disease.

Gaillard's Southern Medicine, Nov., 1908.

Zinc Cyanide.—Dr. W. F. Waugh believes that the special field for zinc cyanide is in the treatment of pulmonary phthisis. Take a patient who has fever, loathing of food, and an irritating, nerve-racking cough; clear out the bowels by simple, non-irritating laxatives, disinfect the alimentary canal by daily doses of calcium sulphocarbonate, one or two scruples, and give zinc cyanide as may be needed to sooth the irritable stomach and dissipate the cough. If the patient bears it well, the dose may safely be increased to gr. 1-12 or even 1-6, but the patient must be fully instructed as to its danger, or he may get careless and take too much.

Introductory Address to the Medico-Chirurgical College of Philadelphia—

Dr. L. W. Fox quotes the following story told by Dr. Adolf Lorenz upon himself:

"Forty-two years ago," he said, "I was a little and very poor boy. One day, wandering along the street, I found a single glove. I put it on. It was much too large and contrasted harshly with my feet, which were bare. Proud and happy, I walked to my home and showed my treasure to my mother. 'My dear boy,' she said, 'you will have to work very hard to find the other glove.' In the many hardships of life I often remember the significance of these words. But at the age of thirty, after many struggles, I had overcome all obstacles as a student and rose to be first assistant to the late Professor Albert. I taught general surgery and the dream of my life was to become a famous surgeon, to rummage in the interiors of fellow mortals. But the dream never came true. I contracted a peculiar form of eczema of my hands and arms from the use of the solution of bichloride of mercury, which was used in sterilizing them. I could not follow my chosen work. I thought that the other glove was gone forever, and I could scarcely resist the temptation to commit suicide. In complaining of my lot to Professor Albert, he said to me, 'If you can't get along with wet surgery, try dry surgery.' So it was not by love but by necessity that I became a dry surgeon. But necessity is the mother of invention, and after twenty years of hard work, I found at last the other glove, and it has brought me the esteem and appreciation of the profession and the grateful thanks of many a mother."

The moral of this story is that you have many specialties in medicine from which to choose the other glove.

Alabama Medical Journal, November, 1908.

Typhoid Fever.—Dr. R. B. Harkness says that milk has been too often convicted

to render necessary any argument as to its guilt in the causation of typhoid. Still when we hear the etiological factors in the production of typhoid reeled off on the fingers of the hand, as it were, we are impressed with the abstract character of the ideas thus advanced. Let this be borne in mind: No matter how filthy a milk supply may be, the milk cannot convey typhoid unless contaminated with the bacillus of typhoid. On the other hand, let a milk be ever so clean in the ordinary sense of the term, and be contaminated with a few typhoid germs, and you get an explosive outbreak of typhoid among those who use this milk. The subsidence of the milk epidemic is usually as precipitate as was the outbreak, when once the source of contamination is removed.

The *musca domestica*, or common house fly, has become well known as one of the most active agents in distributing typhoid infection. The insect has been shown to carry hundreds of thousands of germs on its feet, legs and proboscis. It has also been shown that it carries the typhoid germ in its alimentary canal, from whence it has been recovered after twenty-three days. Numerous epidemics of typhoid have been traced to the fly, and doubtless they always play an important part in spreading typhoid infection when contaminated discharges are left accessible to them.

Adenoids in Young Adults.—Dr. C. Fox believes that adenoid growths which have been removed and show a tendency to return, or those which do not undergo atrophy and disappear, as is usual, at the age of puberty, have not been as commonly recognized or dealt with by the profession as they should. The average practitioner only knows this troublesome disease and only looks for the symptoms of it in early childhood, but during the past few years, by careful post nasal rhinoscopy, we have begun to recognize this condition as existing in young adults and also even in the older patients. While the symptoms are not as alarming nor as acute as those commonly found among our smaller patients, still they are marked enough to draw one's attention. Many a case of post nasal rhinitis has been given douches and sprays, the post nasal region cauterized and recauterized; the tubernated bodies greatly enlarged, and hypertrophied, burnt and cut away, when frequently the removal of the small growth situated in the vault of the pharynx would have corrected all the above conditions. It is needless to speak of the deafness that may and does exist quite frequently, due to the presence of this growth, and the abnormal conditions which this growth causes in the nasal passage, as they are common

enough and recognized in childhood.

Clinical Examination of Urine by General Practitioner.—Dr. C. F. R. Weiss points out that in the matter of the estimation of sugar also much has been done in the later instruments to simplify and to facilitate the test without impairment of accuracy. While Fehling's solution is undoubtedly one of the best reagents for qualitative work, its application to quantitative analysis in the hands of the inexperienced is fraught with serious jeopardy to accurate work. When one remembers with what apparatus and under what conditions of light, etc., these estimations are often made in the surgery of the general practitioner, one can but dimly speculate upon the possibility of anything in the shape of a reliable result being forthcoming. Moreover, apart from the possibility of experimental error, there are actual fallacies attendant upon the use of Fehling's solution. These are due to the fact that other substances in the urine can reduce cupric oxide. The chief of these are uric acid, creatinine, hippuric acid, lactose, glycuronic and glycosuric acids, and certain drugs. There is only one absolutely certain test for glucose—i.e., the fermentation test, glucose being the only fermentable substance ever found in urine.

The Southern Clinic, November, 1908.

Diagnosis Under Artificial Light.—Dr. A. C. Morrison believes that the eye, through all ages, has adapted itself to see by daylight. Its evolution has been wrought in harmony with the solar spectrum. The seven colors of the solar spectrum have a given intensity; combined, they make white light. All artificial illuminants, save acetylene alone, have an excess of one color or another. City gas light has an excess of red, kerosene an excess of yellow and red, the Welsbach burner an excess of green, the arc light an excess of violet, the incandescent an excess of orange and red. Acetylene, on the other hand, has the seven colors in such intensity that compared with sunlight, the difference is negligible. The excess of one color or another in artificial illuminants upsets the judgment of the physician, and is bound to have an effect upon the validity of a diagnosis.

Journal-Record of Medicine, November, 1908.

Long and His Discovery.—Dr. I. H. Gass says that if Dr. Crawford Long had promptly made known the results of his experiments it would have assured the distinguished honors to which he was entitled, and would have prevented long-continued controversy as to who was really the discoverer of anæsthesia. A careful examin-

ation of the question clearly shows that two and a half years elapsed after the discovery by Crawford W. Long, before Dr. Wells, of Hartford, knew the anæsthetic power of nitrous oxide; that four and a half years passed after Dr. Long's initial experiment before Dr. Morton claimed to have the same knowledge. Morton is declared to have received the suggestion from Jackson; the latter claims to have made the discovery about the time Dr. Long made it, but left it to Morton to practically prove. Says Hugh H. Young, of Johns Hopkins Hospital, in his interesting pamphlet entitled, "Long, the Discoverer of Anæsthesia," "The immediate and universal use of anæsthesia in surgery is due to the great Boston surgeons, Warren, Hayward and Bigelow."

Should the Appendix be Removed in all Cases where the Abdomen is Opened for Other Causes?—Dr. L. C. Fischer

after consulting and writing to the various surgeons in this country says that a great many of the best authorities remove the appendix and especially so if it shows the least evidence of inflammation. Dr. Robt. T. Morris calls attention to the fact that the appendix is atrophied in old people and also to the obsence of the appendix in distinctive inflammation. Several times on opening the abdomen have I found what Dr. John B. Deaver chooses to term "Suppurative amputation." This condition is the result of previous inflammation and results in a complete occlusion of the lumen of the appendix with subsequent atrophy. In these cases the patient gives a history of repeated previous attacks and invariably agrees to have the appendix removed for fear of at some future time they may have another attack. I believe the time is not far distant when the majority of the operators will consider it their duty to in all cases remove the appendix, where the conditions of the patient will allow and where there is no suppurative inflammation.

Amoebic Dysentery.—Dr. G. McNiles gives the following under prophylaxis: All drinking water should be boiled, and dishes should be washed in boiled water, also the hands. Raw fruits or vegetables should first be put on ice, and then have boiling water poured over them. This will kill the amoeba. The vaginal douche or rectal enema from suspected water should be avoided. It is also important to sterilize the stools. This may be safely accomplished with carbolic acid 1 to 1,000. The same precautions should be observed with soiled linen.

Serum Therapy in Tuberculosis.—Dr. L. C. Ronglin believes that in tuberculin we possess a remedy for tuberculosis, which

may be justly considered a specific, at least in the earlier stages of the disease, and the adverse reports, made by earlier observers, were due to faulty methods of administration, and an improper conception of its use. When properly employed, one is forced to admit that in tuberculin we at least possess a remedy which is far superior and accomplishes more good than any other drug known. But in order to obtain the best results from its use, it must be given by competent men, and should be combined with proper hygienic and dietetic treatment. We also must not forget that it is a remedy which possesses great dangers, as well as great virtues—that the utmost amount of care and caution is necessary to obtain the best results, and that in the hands of the careless and inexperienced it may bring ruin and disaster.

Virginia Medical Semi-Monthly, Nov. 27, 1908.

Management of Occipito-Posterior Position.—Dr. J. N. Winston believes that if

the head is kept well flexed by the finger in the vagina from the time it strikes the pelvic floor until it is well down in the pelvis, nature will generally do the rotating without any trouble, in the normal pelvis. Of course, if the pelvis has not the natural shape and size, allowances will have to be made accordingly. In few cases, if the above is carried out, will the case call for forceps, and labor will not be much longer than in the normal occipito-anterior positions. In cases where the energy of the uterus has been spent, axis traction forceps can be applied high, after changing the head so that it will be well flexed in their grasp, and gentle and steady traction will generally bring about rotation and delivery. They can be kept on until the head is delivered, or taken off after well drawn in the pelvis. When it becomes necessary to apply them, it is best to deliver while under anesthesia. Unless the head is rotated before applying them, they, of course, have to be re-applied.

Most axis traction forceps are heavy and clumsy, and will cause more tear than thin forceps, and because they have to be generally re-applied constitutes an objection to them.

Some Remarks on Coroners and Their Duties.—Dr. J. W. Broadnax says that the

following deaths may be said to be properly in keeping with the law for the coroner to investigate; and in which to hold inquests, if, in his discretion, he sees fit:

All sudden deaths, whether violent or otherwise.

All violent deaths, whether deaths occur

immediately, or the deceased be
for some days.

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is especially indicated in nervous patients, who fear the effects of the chloroform. A stage of excitement has been observed only with alcoholics. In over 250 cases there were no bad after-effects.

The doses were as follows, given two hours before the operation: Veronal, 8 to 12 grn., dionin, 1-6 to $\frac{1}{2}$ grn., for men; veronal, 6 to 8 grn., with the same amount of dionin, for women; and veronal, 4 to 6 grn., and dionin, 1-6 grn., for children. As a rule, 75 min. of chloroform will suffice to induce narcosis. After the operation the patients will suffer from none of the usual disagreeable symptoms. The pains are slight, there is no paresis of the bladder or vomiting. From 5 drams to 1 oz. of chloroform were usually necessary to keep up the narcosis for one hour. Chloroform by this method may be resorted to where chloroform alone would be dangerous.

Koplik's Sign.—Flamini (Riv. di. Clin. Ped.) describes Koplik's sign as one that always occurs previous to the eruption in measles and renders the diagnosis certain before the appearance of the eruption on the skin. The doubt as to the presence and diagnostic value of this sign is due to a lack of observation of cases at the time when the sign is present. In order to confirm his observations of this sign the author examined daily every child in the children's wards during an epidemic of diphtheria in which one nurse and thirty-three children were attacked. The author found Koplik's sign present in every case, from one to five days before the cutaneous eruption. The sign consists of a red areola in the center of which is seen a small bluish spot, situated on the buccal mucosa. The lesions are grouped and later become confluent. They are from two to six-tenths of a millimeter in diameter. They disappear with the incidence of the skin eruption. He removed from the inside of the cheek a small portion of the mucous membrane containing several Koplik's spots and examined them microscopically. He found that the lesion consists of a hydropic degeneration of the round cells of the epithelium, especially in the superficial layers, with a necrosis of the pavement cells of the epithelium. No true vesicle is formed, but there is an approach to vesiculation. He believes that Koplik's sign may be regarded as a form of eruption of measles on the inside of the cheeks. It is never found elsewhere than on the cheeks and lips.

Bier's Hyperemia as a Prophylactic Against Post-Narcotic Nausea.—Ritter in the *Zentralblatt f. Chirurgie*, reports that in the clinic at Greifswald it was found that

patients who were operated on under the ether drunk, were especially subject to nausea when they were treated in the polyclinic. This was probably due to the insufficient preparation and the early removal to which these patients were subject. To prevent this, Ritter has applied around the neck of such patients the bandage used for Bier's hyperemia for $\frac{1}{2}$ to 1 hour after the operation; and since adopting this plan in 62 cases he has not seen a single case of nausea following brief ether anesthesia. Just how the hyperemia works is not certain but Ritter believes that the excess of blood in the brain neutralizes the ether there. In support of this view Ritter cites the fact that patients upon whom a narcosis is attempted, with the stasis band in position around the neck, are very difficult to narcotize. In one case he tried for some 15 minutes to narcotize the patient without success, but as soon as the bandage was removed narcosis ensued at once. The writer describes an experiment on a dog in which so much cocaine was used that an apparently fatal poisoning resulted. All the ordinary methods of resuscitation were employed without result; he finally applied the Bier's bandage to the neck, and although no immediate result was observed and the dog was laid aside for dead; the next morning it was found alive and happy. The inference as to the use of this method in cases of apparent death from any general anesthetic is obvious.

Creatinin Excretion in the Puerperium and Uterine Involution.—Longridge (Jour. Obst. and Gyn. Brit. Emp.) says that during the first nine days of the puerperium the output of creatinin during the most active period of involution of the uterus is during the first day or two, probably due to the fact that the patients had not been placed upon a creatinin free diet for three days before the observations were started. On the sixth day the low percentage is due to the high excretion of total nitrogen. With these exceptions the percentage excreted as creatinin remained about 3 per cent. for the whole period. No increase of creatinin excretion was found during the most active period of autolysis of the uterus. He mentions the following conception of the process of involution: During labor the powerful contractions of the uterus lead to the development of sarcolactic acid in the uterine wall. This acid is neutralized by the circulating blood. When the uterus contracts down after the expulsion of its contents, it is probable that the formation of sarcolactic acid still goes on, but now there is no blood to neutralize it. The uterus is therefore left in a condition of anemia and diminished alkalinity, two fac-

tors which favor rapidity of autolysis. The wall of an autolysing uterus removed by the Porro-Cesarean operation was found thirty-six hours after the operation to be of a distinctly acid reaction. During the first stage of involution when the circulation through the uterus is slight or even completely absent the products of autolysis are retained in the uterus. After four or five days the uterus becomes considerably softened, and the blood begins to percolate more freely through the organ. The products of autolysis are then washed out, and owing to the presence of alkaline blood, the rate of autolysis is very much diminished, and the second or slow stage of involution begins.

Ichthyol in Gynecological Practice.—

Chesner (*Quinzaine Therapeutique*) says that ichthyol possesses very active bactericidal properties, and, according to Dr. Latteux, of Paris, will destroy all forms of pathogenic bacteria in a strength less than that in which it is used therapeutically. Professor Unna, of Hanburg, has also shown that ichthyol has marked effects in relieving congestion. Owing to these two properties, ichthyol has been favorably received by gynecologists, and is now used very widely. Professor Pozzi has used it continuously since 1892, and has obtained excellent results. Professor Freund, of Strassburg, and Schauta, of Prague, have used it with unvarying success in uterine infections.

The therapeutic value of ichthyol is due to its high percentage of sulphur, the latter being present in a specially combined state, which gives it the active properties of nascent bodies. Ichthyol should be pure, as, if impurities are present, blisters and other eruptions may be produced. The use of ichthyol in gynecology depends upon the properties which the drug possesses. Thus it is useful in congestions of all kinds; in inflammatory exudations in the genital region, as in pelvic peritonitis, chronic parametritis, chronic metritis, inflammations of the ovary and Fallopian tubes, erosions of the cervix, cystitis, the various manifestations of gonorrhea, and anal troubles.

In gynecology ichthyol is employed as a 10 per cent. solution in glycerin. Into this fluid pads are dipped, and then applied to the inflamed tissues. Suppositories of glycerin and ichthyol are more convenient, and prevent the unpleasantness of the physician handling the pads. Ichthyol suppositories are very useful also in rectal affections, fissures, fistulæ, and piles. Ichthyol has also proved valuable in vulvar pruritus and eczema. For vulvar pruritus, the following formula, according to Bardazzi, has proved very effective. Ichthyol, 10 grn.; menthol,

1 grn.; dermatol. 5 grn.; petrolatum, 50 grn.; two or three applications a day. For eczema the following ointment is used: Ichthyol, 10 grn.; lanolin, 40 grn.; essence of bergamot, q. s.

The Treatment of Facial Paralysis by Nerve-Grafting.—Ito and Soyesima (*Dtsch. Ztschrift. f. Chir.*) treated six cases of facial paralysis with nerve-grafting, two of these being treated by facial-accessory anastomosis, and four by facial-hypoglossus anastomosis. All these cases were of the rheumatic type. The operation was performed at the earliest one year after the onset of the paralysis. In two cases, the paralysis was of 12 years' standing, in one of 15 years, and in one of 35 years. Since disfiguring by movements occurred in the first two cases, in which facial accessory grafting was performed, the remaining cases were treated by facial-hypoglossus anastomosis. Central implantation was employed by the authors, who implanted the accessory or hypoglossus-flap, respectively, with a central base into a longitudinal slit of the facial, fine catgut threads serving as suture material. The after-treatment consisted in electricity and massage, but first in methodical exercises before the looking-glass. In regard to the ultimate results, the duration of the paralysis plays an important part, without, however, excluding the prospects of a favorable outcome after the condition has existed for years. Besides the age of the patient, the makeup of the facial muscles has an influence in this connection, for it was found that certain muscles reacted very promptly to the interference. The success of the operation was especially evident with the face at rest, in such a way that the facial asymmetry was considerably improved, but it reappeared again in sudden and forcible movements of the face. The value of the operation therefore consists chiefly in the cosmetic improvements it provides.

The Opsonic Index and the Use of Tuberculin.—Fowler, in the *British Medical Journal*, states that the effects of a prolonged and careful trial of tuberculin in cases under the care of eight physicians at the Brompton Hospital may be thus summarized:

1. Tuberculin, if introduced under the skin, speedily causes inflammatory changes in and around tuberculous lesions.
2. The action of tuberculin in lung tuberculosis is to cause breaking down of the tuberculous masses and of the lung tissue in the neighborhood, and thus to promote the formation of cavities. That this is the case is proved by the appearance of lung tissue in the sputum, where it was previously absent, and by the physical signs of

cavity replacing those of consolidation.

3. Tuberculin increases the amount of expectoration, but there is no proof that it diminishes the number of tubercle bacilli contained therein, for in some of the cases they apparently increased under its use.

4. In many cases tuberculin injections are followed by distinct extension of disease as evidenced by physical signs.

5. The reactions due to tuberculin are as exhausting to the patient and cause loss of weight and strength.

6. This treatment is specially contraindicated in lung tuberculosis accompanied by pyrexia, as likely to convert intermittent into continuous pyrexia.

7. Lung excavation accompanying the use of tuberculin may be followed by contractile changes due to fibrosis. This was shown in two of the cases under observation in which diminution of cough and expectoration and gain of weight took place.

8. The tuberculin did not favorably influence the course of the disease in the majority of cases, in some the effects were detrimental, and even in the stationary and improved cases it was difficult to ascribe any distinct improvement to the injections which might not have been equally attained under the treatment ordinarily used in the hospital.

Acute Nodular Syphilitic Leptomeningitis and Syphilitic Arteritis of the Cerebral Arteries.—Durck (Ctblt. f. allgem. Pathol. u. pathol. Anat.) mentions five cases of acute syphilitic leptomeningitis, in which the exudate appeared in the form of circumscribed nodules in the soft meninges of the brain, presenting a marked resemblance with tuberculous nodules. Three of these cases concerned adults, and two were children of 12 and 13 months of age, respectively. Two patients died four and five months, respectively, after the syphilitic infection. The nodules essentially presented a peri-vascular arrangement, and consisted for the most part of lymphocytes and epithelioid cells; the ultimate fate of these nodules is caseous necrosis. Two cases, adult patients, were affected in addition by other syphilitic lesions of the central nervous system, and gummata in an occipital lobe, in one case, and hypertrophic spinal (cervical) pachymeningitis in another. The vessels were invariably affected, and in two cases there was a typical syphilitic arteritis of the larger cerebral vessels (once in an adult five months after the infection, and once in a child 13 months of age, having congenital syphilis). Upon the basis of these observations, the following conclusions are arrived at.

1. Acquired as well as congenital syphilis

may be accompanied besides by diffuse chronic leptomeningitis, by the acute nodular type of this disease, which macroscopically presents a very close resemblance to tuberculous meningitis.

2. The circumscribed nodules consist either of round cells alone, in peri-vascular arrangement, or of true gummata with central caseation.

3. Like tuberculous meningitis, the acute nodular syphilitic type of the disease attacks the base especially, but may occasionally extend to the convexity.

4. The origin and distribution of acute nodular syphilitic meningitis take place by the lymphatic route exclusively, instead of as a concomitant of general embolism.

5. The nodules are made up, in addition to epithelial cells, almost exclusively of lymphocytes.

6. The bloodvessels of the inflamed area are more or less severely involved in all cases.

7. The proliferation of the intima, in syphilitic arteritis, may originate independently of the peri-arteritis. It starts from the Langhans' layer of the intima, not from the endothelium itself. The giant cells originating within the area of the intima are likewise formed by this layer.

8. The new formation of the elastica, in syphilitic arteritis, may take place through a new formation of elastic fibres, with differentiation, from the proliferating tissue of the intima.

Motor Aphasia Terminating in Recovery.—Dejerine (Gazette des Hôpitaux) mentions a case of a man 65 years of age, suffering from right-sided hemiplegia and aphasia. The last named symptom disappeared prior to death, but at the autopsy certain important lesions were demonstrated in Broca's convolution. A number of analogous cases are on record, in which the aphasia either disappeared or underwent notable improvement, whereas there was persistence of the hemiplegia and the lesions in Broca's convolution. Motor aphasia is known to have a relatively favorable prognosis in children and youthful individuals, but recovery from it becomes more and more uncommon in proportion to the advancing age of the patient.

Pneumonia in Childhood.—Whipham, in The British Medical Journal, says that pneumonia is one of the common affections of childhood. When a child has pneumonia, it is a common error to imagine that it must of necessity have lobular or bronchopneumonia. Such is by no means always the case. The lobar variety of pneumonia is much more frequent in childhood than is often supposed. The diagnosis between

lobar pneumonia and bronchopneumonia is often a matter of some little difficulty. The chief points of distinction to be borne in mind are: 1. Lobar pneumonia is almost always primary, while bronchopneumonia is frequently secondary; 2, its onset is sudden and the symptoms well marked, whereas bronchopneumonia begins insidiously as a rule; 3, the temperature in lobar pneumonia tends to be more uniformly high and to end by crisis, whereas in the other form the course of the fever is prolonged and irregular, and rarely ends abruptly; 4, lobar pneumonia usually affects a localized area of one lung, at any rate to begin with, the signs being limited to that area and leaving the rest of the lung free, while bronchopneumonia is bilateral and more extensive; 5, bronchopneumonia tends to occur at a slightly earlier age than lobar pneumonia. In lobar pneumonia, the male sex is the one that is chiefly affected in childhood, as in adult life, and the disease may occur at any age. In the author's series the right lung was affected in 37 cases, or 56.9 per cent.; the left in 23, or 35.3 per cent., and both lungs in 5 cases, or 7.8 per cent. It is of general knowledge that the right lung is more often affected than the left, but in these cases the incidence on that side was rather more frequent than appears usually to be the case. The onset of lobar pneumonia is almost invariably sudden. The disease terminated in a definite crisis in 44 out of the 54 cases, or in 81.4 per cent., in which the termination of the pneumonic process could be accurately determined. In the majority of cases the crisis took place between the fifth and tenth days, during which period it occurred in 30 instances, or 68.1 per cent. A few cases terminated by crisis as early as the third or fourth day. The temperature in children often tends to vary considerably between wide extremes, a high temperature alternating with a normal or subnormal one. In the series of 65 cases 11 patients died, giving a total mortality of 16.9 per cent.

Bronchopneumonia in childhood is more particularly a disease of early infancy. In the writer's 85 cases the sexes were affected equally. The author's cases consisted of 33 primary and 52 secondary cases. The lesions of bronchopneumonia are to be found, as a rule, simultaneously in both lungs. In the greater number of cases the disease begins insidiously, and this is especially the case in the secondary form. Speaking generally, the temperature in bronchopneumonia is not so high as in the lobar form and is less regular, the remittent or intermittent type being more or less characteristic. The duration of the fever was found to vary considerably. The temperature

subsides gradually in nearly all cases—in other words, a crisis seldom occurs. He had a total of 39 deaths in his 85 cases, or a mortality of 45.9 per cent. Bronchopneumonia complicating measles has a bad prognosis, and is closely followed by that associated with whooping cough and a previous bronchitis. During the first two years of life the mortality is high. A sudden onset of the disease in primary cases appears to be of unfavorable import. The temperature also affords some indication of the virulence of the infection, hectic temperature with high maxima having an especially bad prognosis. Such cases are generally due either to a streptococcal or a mixed infection.

Reflex Headache in Hypertrophy of the Turbinate Bodies.—Casali (*Giornale Medico del R. Esercito Italiano*) describes the following forms of headache of nasal origin: (1) Headache, with permeable choanæ, almost continuous, appearing in the morning as soon as the patient wakes up, subsiding at meal-time and returning with greater severity in the course of digestion. The bromides are useless in these cases, whereas the patients are often relieved by menthol valerianate. (2) Headache in the presence of acute rhinitis. The pain is located at the root of the nose and in the forehead, and is associated with nasal obstruction. Quinine hydrobromate is recommended as beneficial. (3) Headache in the presence of nasal stenosis. The pain is unilateral, and occurs especially in the morning hours. It subsides after painting the mucous membrane with cocaine-adrenalin. A useful sedative in these cases is citrated caffeine (60 centigrammes four times daily, alone or combined with suitable agents). (4) Headache in the presence of acute sinusitis. The pain is continuous, and localized in the affected side. It may be relieved by the administration of calomel (10 centigrammes in the morning on six successive days). In the presence of maxillary disturbances aconite should be prescribed ($\frac{1}{2}$ -2 mg).

Chronic sinusitis, syphilis and tuberculosis of the nose likewise give rise to characteristic forms of reflex headache.

The Treatment of Infantile Rectal Prolapse by Longitudinal Stiffening of the Rectum.—Kephallinos (*Jahrbuch für Kinderheilkunde*) says that instead of retaining a prolapsed rectum by means of annular injections of paraffin around the sphincter, as previously suggested, he aims at supporting the rectum in its natural position, according to the method proposed by Spitzky. This is accomplished by linear injections of paraffin into the para-rectal connective

tissue. As a rule, two paraffin holders are applied on the right and left side, behind the rectum, but one is frequently sufficient for the purpose. The operation is done under partial ether anaesthesia. The technique requires some experience, so as to obtain a paraffin prothesis of uniform size. Altogether 32 patients were treated in the Orthopaedic Department of the Children's Clinics in Graz, without a single instance of embolism. The results were so favorable in all the cases but one that the procedure is recommended for further adoption.

The treatment of rectal prolapse in children may be medicinal, electrotherapeutic, topical or operative. As the simplest surgical procedure, the author recommends the above-described paraffin-injections into the para-rectal connective tissue on either side of the rectum; in other words, the introduction of two paraffin protheses, on the right and left side, behind the rectum. The customary dressings are applied after the injection. The results were practically always favorable in an experience extending over three years.

The medicinal treatment of rectal prolapse in children consists in the external and subcutaneous employment of nuxvomica; the subcutaneous application of ergotin; painting of the mucosa with a stick of silver nitrate; the employment of suprarenal substance, in a solution of suprarenal tissue in glycerine, which is administered as an enema.

Motor Aphasia Terminating in Recovery.—Dejerine (Gazette des Hopital) describes the case of a man 65 years of age, suffering from right-sided hemiplegia and aphasia. The last-named symptom disappeared prior to death, but at the autopsy certain important lesions were demonstrated in Broca's convolution. A number of analogous cases are on record in which the aphasia either disappeared or underwent notable improvement, whereas there was persistence of the hemiplegia and the lesions in Broca's convolution.

Motor aphasia is known to have a relatively favorable prognosis in children and youthful individuals, but recovery from it becomes more and more uncommon in proportion to the advancing age of the patient.

The Operative Treatment of Exophthalmic Goitre.—Klemm (Archiv für klinische Chirurgie) refers to the subject of exophthalmic goitre, and reports in detail thirty-two cases. The author sums up as follows:

Exophthalmic goitre is essentially a toxic-trophic-vasomotor neurosis which is caused by abnormal change in the secretion of the thyroid gland. The most important symp-

toms are those of disturbed innervation of the vessels. The next most important symptom is trophic in character, and dependent upon the vascular disturbance. Goitre which is due to hyperemia of the gland, or vascular dilatation, must be distinguished from the exophthalmic form, although the symptoms are often very much alike. The distinguishing signs of exophthalmic goitre are those of disturbed vascular innervation. There are transition forms from the vascular to the exophthalmic form which are of very similar symptomatology, but are nevertheless not clear cases of exophthalmic goitre. The best remedy is operation, because this brings about the quickest, surest, and most lasting cure. The author operates as soon as the diagnosis is established.

Nephritis in Infants.—Carpenter (British Journal of Children's Diseases) says that cases of infantile nephritis are very apt to be overlooked clinically, inasmuch as extensive kidney disease may exist in infancy without dropsy. It is also a peculiarity of infantile nephritic kidneys, whether of syphilitic or simple origin, that they frequently appear normal macroscopically even though they are extensively diseased. Though some cases of infantile nephritis are undoubtedly syphilitic, others are certainly not so, and it is doubtless true that interstitial nephritis may be produced by toxins other than those of congenital syphilis. It is possible that the interstitial nephritis may thus begin in very early life, being due to the presence of intestinal toxins. The combination of parenchymatous and interstitial inflammation is apparently not uncommon in the nephritis of infants.

Appendicitis in Children.—Riedel (Munch. med. Woch.) reviews the results of operations on 1,222 adults and 310 children for appendicitis, with a mortality of 6.7 per cent. for adults and 16.4 per cent. for children. The reasons for the surprisingly large mortality in children are the carelessness of parents in noting symptoms of a serious nature in children, the difficulty of an accurate diagnosis and the greater severity of the disease in children. Small children are extraordinarily sensitive to infections of the appendix. There seems to be a more general knowledge of appendicitis among parents now than formerly.

Treatment of Bronchopneumonic Catarrh.—Ferrata and Golonelli (Gazz. Internaz. di Medicina) report upon the results of styracal therapy in bronchopneumonic affections, observed in the clinic of the University of Parma during three years. It can be stated with certainty that styracal, which is a guaiacal preparation, exerts a

decided influence upon the mucous membrane of the bronchi. After the use of strycol the night-sweats are less annoying and the fever drops. An influence upon the bronchi is also manifest in that the expectoration is lessened in amount and becomes thinner. Many patients experience considerable relief from cough, and the general condition improves remarkably.

Styracol was used with good results also in various intestinal affections.

They recommended styracol particularly, owing to its effect upon the severity of the bronchial catarrh and its antipyretic action.

The Treatment of Trachoma.—Von Elschmig (Med. Klin.) says that acute conditions are to be treated by washing the eye hourly with a 1-5,000 solution of oxycyanate of mercury and by applications of ice-cold compresses three times a day. In the chronic conditions, squeezing out or excising the granules is recommended. As an after treatment and for removal of isolated granules, massage with a sterilized glass rod. If there is extensive scar formation, or where constant medical supervision is impossible, a 5 to 10 per cent. citrate of copper ointment is to be rubbed daily by the patient into the conjunctiva. Local applications of cocain, and especially of adrenalin, are condemned. For ulcer formation 10 per cent. orthoform ointment is approved.

The Larynx in Typhoid Fever.—Jackson (The Scottish Medical and Surgical Journal) is of opinion that—“(1) Serious and fatal lesions of the larynx are much more frequent than is realized; (2) death may occur from laryngeal stenosis without even the existence of a laryngeal lesion being suspected, in the absence of laryngoscopy.” Three types of laryngeal lesion were found based on a series of 360 hospital cases watched throughout their illness: 1. Subacute laryngitis without solution of continuity of mucosa. 2. Ulcerative laryngitis. 3. Perichondritis, with or without necrosis of cartilage. Ulcerative laryngitis occurred in 18 per cent. of the total number examined. The location of the lesions is of interest, those parts of the larynx nearest the mouth being chiefly affected. The epiglottis was affected in 42 instances, the aryepiglottic folds in 22, the interarytenoid space 18 times, and in 10 instances the arytenoids, while the vocal chords were singularly free from attack, ulceration only occurring once, and in that case there was a syphilitic history with rapid cure under specific treatment. Jackson thinks that these ulcers are not true typhoid fever glandular enlargement analogous to those occurring in the intestine. He concludes

thus from their lateness of occurrence, their contour, and their location. Ulcers were found 42 times “on or near the free border of the epiglottis, where adenoid tissue does not exist.” Pain may not be present, hoarseness may be absent; dyspnoea and cyanosis are not common, but apnoea on the contrary is a frequent symptom. Perichondritis was found in 19 cases, and the author considered that syphilis was an important etiological factor in this last class. The treatment is, where lesions have developed, oral antiseptics, benzoin inhalations, and mercury and iodide of potassium, even here there is no specific history. Early tracheotomy, which was necessary in eight of Jackson's cases, he considers of the utmost importance. “All lesions disappear as if by magic after an early tracheotomy.” He concludes by urging the routine laryngoscopic examination of all typhoid fever patients.

Max Salomon on Medical Greek.—Salomon (Deutsche medizinische Zeitung) writes:

“Rose as a profound Greek scholar complains of our medical onomatology, which he stigmatizes as largely corrupt, unscientific, ridiculous, and absurd. According to Rose, we construct Greek words that set at naught the fundamental rules of the Greek language, instead of first taking counsel with our Greek colleagues. Errors of this kind in a living language he considers absolutely inexcusable. He urges us to free ourselves at least from the erroneous assumption that the present Greek of the educated classes materially differs from the ancient classical Greek; no, ‘it is pure Attic, it is the immortal Greek in all its youth and beauty, free from foreign elements.’

“Some time ago Rose appeared as champion of the Greek language in a pamphlet entitled Greek as the General Language of Physicians and Scientists Generally, published by Volkmann, of Leipzig, in 1893. In this learned treatise, built up on the foundation of sterling knowledge, the author—with whom we agree—also complains of the irrational method of treating Greek in our high schools. Greek there is taught as a dead language, while it is spoken in all its purity and beauty by the Greek of today, and should therefore be treated in the educational system as a living language. A so-called ‘New Greek’ does not exist at all. Unfortunately this admirable work does not appear to have met with the recognition it undoubtedly deserves. May these lines contribute to its becoming more widely known and to a change being wrought in untenable conditions.”

Vaginal Cleanliness.—Ahlfeld (Zeitschr. f. Geb. u. Gyn.) has studied with regard to the question of the effect which the preliminary cleansing of the vagina has on the morbidity of the puerperium. No disinfecting effect can be obtained with a one per cent. solution of cresol; at least three per cent. is essential for efficient irrigation. The average of his "irrigated" cases in which no temperature occurred was about 68 per cent.; while during two years in which no irrigations were employed the number sank to 53 per cent. In operative cases the non-fibrile average was even greater than above stated; here the cleansing was more complete and thorough. When streptococci were demonstrated in the vagina before douching, a marked decrease in the number of growing organisms was noticed within a few hours after the irrigation had been given. He says that irrigation is attended with such good results it should be much more frequently employed.

The Results of Operation for Radical Cure of Hernia.—Hutchinson, in the London Medical Lancet, says that despite the frequency with which radical herniotomies for inguinal hernia are being done year after year, comparatively little is still known of the ultimate results of this operation. The statistics vary widely, not only because of the lack of uniformity in the technic of the Bassini operation, but also because of the subsequent faulty and insufficient observation. This communication of Hutchinson's is of especial value because sufficient time has been allowed to elapse, (average 6 years) in the cases studied. The cases are those of the working class and have seemingly been subjected to strict observation. Before reporting the results, it will be necessary to say that the operation performed by Hutchinson was in the vast majority of cases a typical Bassini herniotomy, except that the sac instead of being cut away was twisted and the proximal portion transplanted to a new position. Kangaroo tendon was used for the burying suture. In a few cases the Macewen operation was done, and in some of the earlier cases the sac was merely tied off, without any attempt to narrow the canal. In 100 cases there were eight recurrences; of the eight, two were Bassini operations, one a Macewen and the remaining five occurred in the cases in which the sac was merely tied off.

Julien (L. Echo Med. du Nord) mentions the opinion of Kirminon, who says appendicitis is one of the most important surgical affections of infants; it is essentially a disease of infants. The author in one year has had six cases, five of which were oper-

ated on with one death. The writer does not believe in the saying, "operate always and at once." His cases are as follows: (1) Very severe, acute appendicitis, with retro-caecal abscess: operation the third day; cure. (2) Acute calculous appendicitis, retro-caecal abscess: operation the third day; cure. (3) Acute appendicitis, with local peritonitis, but less severe than preceding: medical treatment; cure. 4. Acute suppurative appendicitis, with pointing of abscess towards lumbar region: incision of abscess in the loin; cure. (5) Acute appendicitis, with generalized septic peritonitis: operation on seventh day when patient was in extremis; death fifteen hours after operation. (6) Acute appendicitis, with generalized haemorrhagic peritonitis: operation in extremis; cure, the drainage tube being removed on the tenth day.

Notes on 679 Operations Performed Under Spinal Anesthesia by Tuffier's Method.—Sabadini, in The London Medical Lancet, had 11 per cent. failures; he believes that just as with ether and chloroform there is a varied idiosyncrasy among patients; he has found most resistance in nervous and alcoholic patients. Vomiting was noted in 22 per cent. of the cases; as a general rule, however, the vomiting does not last more than five minutes. In the past three years, the author has reduced the vomiting by 50 per cent. by allowing the patients to have their breakfast before the injection. In a little over 9 per cent. the injection was followed by headache. In recent years the author has been able to reduce even this symptom to a minimum by allowing more cerebro-spinal fluid to escape than the amount of anesthetic injected. The headache follows stovain as well as cocain. The author has had no death in his series. The author also reports 108 cases of spinal anesthesia with stovain. He believes that constitutional effects are less frequent with this anesthetic than with cocain. He concludes that spinal anesthesia is a harmless procedure and that its advantages outweigh those of ether or chloroform in cases where it is applicable.

The Results of Interscapulo-Thoracic Amputations.—Jeanbrau and Riche (Rev. de Chir.) have gone into the literature of interscapulo-thoracic amputations with a view to determining the ultimate results of these operations. They find that in cases of amputation for malignant disease of the shoulder not preceded by excision of the scapula or disarticulation of the humerus— (1) The operation mortality, which before 1887 was about 29 per cent., has now fallen to about 8 per cent. This improvement they attribute to asepsis and the adoption

of the Berger-Farabœuf technique. (2) The mean period of survival is three years. (3) Cure is possible, as they have collected twenty-four cases in which the patient has survived more than five years. Among these we find patients alive more than ten, thirteen, fifteen, twenty, and twenty-one years after. It is interesting to us to observe that apparently the patient who survived longest was operated on by Syme twenty-one years before he was last seen. These observations are of great interest, as they demonstrate the value of this serious operation in prolonging life.

A Large Teratoma of the Neck Successfully Removed from an Infant Three Weeks Old.—McGregor, in *The London Medical Lancet*, reports an exceedingly rare tumor in that it contains solid matter of tissues of varied origin. The growth was about the size of a closed fist, oval in shape and extending from the clavicle to the middle of the cheek and from the middle line in front to anterior border of the sterno-mastoid muscle posteriorly. It had a number of round elevations on its surface. The tumor was freely movable and pendulous, causing difficult breathing when the child was turned on its right side.

On palpation it was softly fluctuant and two of the rounded elevations were of cartilaginous hardness. On operation it was found to consist of a number of cysts and some solid tissue. The whole growth was separated from its attachments and removed.

The child made a good recovery in 24 days. The risk of the operation was undoubtedly, owing to the age of the infant and the location of the growth.

The Treatment of Fractured Patella by Transverse Wiring.—Hamilton (*Edinburgh Medical Journal*) gives a synopsis of sixteen cases of fractured patella treated by wiring. In preparing the skin he uses a preparation of sulphate of barium, which removes the hair and also the hard, dead epithelium over the ligamentum patellæ much better than a razor will. If mixed with a little oxide of zinc it will not prove irritating. The flap is turned up rather than down. The operation is not performed for several days after the accident. Silver wire is passed through the drill holes by means of a cannula. The operation is completed in about sixteen minutes. In one of the cases the patella was in seven pieces, and an encircling wire had to be used. After the first day the temperature was uniformly normal. The splint is taken off in ten days. The patient is allowed out of bed in two weeks and encouraged to move the knee. This movement is carried to a right angle at the end of four weeks.

Bacteriology of Whooping Cough.

Alberico (Il Morgagni) after referring to the research of others, describes a diplococcus which he found constantly in 60 cases of pertussis, and which he believes is the specific organism in this disease. The diplococcus, collected from the sputa of the children, consist of two almost spherical (very rarely elongated) reverse elements enclosed in an oval capsule. Sometimes the diplococci form chains of six or eight elements, and in this case the single capsules seem fused into one. The cocci are usually of the same size, about 0.8 m. in diameter. They stain fairly well with fuchsin, but best of all with the Ziehl stain. Pure cultures were obtained in broth after forty-eight hours at 22 to 24 degrees C. He found this organism most readily during the height of the pertussis epidemic, and as this waned so the diplococci became scarcer. In one case of purulent otitis in a child of 15 months, suffering from whooping cough, the author found the organism in question in the aural discharge. Whether this diplococcus is the same as that described by Vincenzi and Litres is uncertain, but in any case the author feels fairly confident that the organism found by him is the specific cause of pertussis.

The Opsonic Method in Skin Diseases.

—Whitfield (*Trans. Internat. Dermat. Cong.*), describes in full the technique of opsonotherapy with the preparation of autogenous vaccines, and comes to the following conclusions as a result of several years of steady work upon the subject:

1. The opsonic treatment of boils is uniformly successful and is the only form of treatment for general furunculosis which is in the slightest degree reliable.

2. In sycosis the treatment is a valuable aid, but must be continued for long periods in proportion to the duration of the disease, and it is best combined with X-ray depilation.

3. In acne the treatment is uncertain, in some cases being most brilliant, in others without the slightest avail.

4. In septic dermatitis and ulcers the treatment is of very distinct value as an auxiliary.

5. In Bazin's disease the treatment is somewhat uncertain, but it is sometimes of assistance. In tuberculous ulceration it is of great value.

6. In lupus the treatment alone is too slow and uncertain to be recommended. It is, according to Bulloch, a valuable auxiliary in preventing relapse after Finsen treatment, and I have found it of value combined with the H-rays.

A Case of Aplasia of the Thyroid Gland, with Vicarious Lingual Goitre.—Ungermann (Virchow's Archiv.) found that in an autopsy performed in the Koenigsburg Pathological Institute upon a man 30 years of age, the thyroid gland to be absent from its normal site, the cervical organs being otherwise normal. Instead of the missing thyroid, a rounded tumor, the size of a chestnut, was discovered at the base of the tongue, directly behind the foramen cecum. This tumor was firmly adherent to the neighboring tissue, and consisted of functioning thyroid parenchyma, with moderate colloid changes. One small glandular body was found to lie on the right side, and two such bodies on the left side, of the urethra. In the region of the left lobe of the thyroid gland, there was a small mass, the size of a pea, consisting of thyroid gland tissue. There had been no symptoms of absence of the thyroid secretion in the patient's lifetime.

He was enabled to find descriptions of 29 instances of this rare affection in the literature.

Gangrene of the Skin in Scarlatina.—

Heubner (Berl. Klin. Woch.) describes an unique case of scarlatina with a recurrence of fever and eruption three weeks after the first attack, characterized by severe pain in the joints. The eruption showed marked deep redness and swelling of the skin at various points, which amounted to a gangrenous condition over the right elbow-joint. A slough occurred which left a large denuded space which healed very slowly. The position of this gangrenous patch was such that it could not be due embolism, on account of the numerous anastomoses in the circulation supplying the skin of the part.

Modern Methods of Treating Infective Conditions of the Throat.—Young, in the London Lancet, has observed the respective values of gargling, douching, swabbing, use of trochees, etc., in combating septic conditions in the mouth. The author has made cultures before and after the employment of these various methods from throats seen in connection with scarlet fever, diphtheria, "hospital sore-throat," etc. The writer's results go to show that for throat disinfection gargling possesses no advantages but rather several disadvantages. It is merely a flushing process at best and sterile water is doubtless as efficient as are many of the gargles used. Douching properly done is useful, but is hardly adapted for anything except hospital service owing to the difficulty of performing it and the dangers of it when improperly done. Spraying is little better than gargling. Gratify-

ing results were obtained in Young's observations by use of medicated lozenges. The best method proved to be swabbing. He states that to secure the best results with this method the patient should be placed with the head well back over a pillow in pretty much the same position as for removal of adenoids, so as to prevent any liquid from swab going into the larynx. The swabs should be nearly as large as a walnut and can be made of absorbent cotton or wool securely fastened in an ordinary sponge holder. They should be firmly and rapidly passed over the fauces with a rotary motion, and, if possible, thrust up into the nasopharynx, at least three or four swabs being used at each attempt. A very useful combination for using on the swab is the one so common in otological practice. Boric acid, one ounce; rectified spirits, two and one-half ounces, and pure glycerine, eight ounces. After swabbing the fauces once with this and then with sterile water the bacterial flora of the anterior pillars was reduced to twenty-five total colonies and there was an entire absence of staphylococci and streptococci.

Contribution to the Study of Treatment of Wounds of the Ureter in the Course of Surgical Operation.—Bernasgoni and Colombino (Ann. des Mal. des Orig. Urin.) have demonstrated the feasibility of anastomosing one ureter into its fellow, and sum up their investigations in the following conclusions:

When the course of an operative procedure the ureter is accidentally wounded, the condition may be remedied in the following way: If the division is a few centimeters from the bladder, the ureter may be pulled down 3 to 4 centimeters and implanted into the bladder. If the division is higher up, either at the level of the iliac or the lumbar region, two expedients present themselves: (a) a simple section without a loss of substance, or with a slight loss of substance, when we may approximate the divided ends of the ureter and anastomose them according to the methods of Van Hook or others. (b) section with loss of ureteral substance, rendering impossible the coaptation of end to end. In this case, in view of the satisfactory results obtained experimentally as here reported, lateral anastomosis of the two ureters with each other should be attempted. The operation is no more difficult or long than uretero-enterostomy and can be done easily, especially in women, at the level of the 4th or 5th lumbar vertebra.

Changes in the Nails After Acute Diseases.—Eger (Berl. Klin. Woch.) describes three typical cases in convalescents after

multiple neuritis, typhoid fever and toxic gastro-enteritis. The effects are usually most marked on the thumbs, less so on the other fingers and toes, and consists of white spots or transverse furrows, in front of which the nail is very brittle and scaly. The condition appears as the nail pushed forward into view by the growth of the matrix, and is probably the result of the defective nutrition during the course of the illness. The ridge, which presents itself back of the groove is most likely due to a new proliferative process, which begins as the general disease subsides, and expresses an effort to get rid of the dead portion of the nail.

Prognosis and Technic of Nephrectomy for Renal Tumors—Kroenlein (German Association of Naturalists and Physicians) reported the results obtained in twenty-five cases of renal tumors treated in the past twenty-three years, and comprising hypernephroma, sarcoma, echinococcus cyst, polycystic degeneration, and teratoma. All these tumors, with the exception of the one of echinococcus cyst, were extirpated by means of the retroperitoneal method with incision in the loin. The operative mortality of malignant tumors was 9 per cent. The most unfavorable prognosis was in cases of hypernephroma. Of eight cases of cancer which survived operation, two had remained from recurrences, one being still alive after twenty-three years.

Return of the Patellar Reflex in Tabes Dorsalis, without the Addition of Hemiplegia—Donath (Neurol. Centralblatt) says that instead of destruction of the reflex centre or reflex arc, a reputable anatomical lesion or a temporary functional inhibition will have to be assumed in explanation of a case with returning reflexes. The fact that other pathological symptoms were relieved at the same time would seem to point to a reparable lesion of the spinal reflex centre. The patient, who had tabes without hemiplegia, presented a return of the patellar reflexes in repeated examinations. (No syphilis in the anamnesis.) The knee jerks were feebly present 22 months after the first examination, and after the internal use of mercury and potassium iodide, with hydrotherapy. Five months later, the reflexes had become lively. A similar case of tabes without syphilis is described by Berger. Return of the patellar reflexes resembles the intermittent fixation of the pupil described by Eichhorst in tabes. In the above case, one pupil likewise showed a return of the lost reaction to accommodation and convergence.

Hot Gelatine Enemata in Hemorrhage from the Bowels.—Michaelis (Mediz.

Klinik) treated eleven cases of intestinal hæmorrhage in typhoid fevers with hot enemata of a gelatine solution with excellent results. The injections were administered in such a way that in the first place the foot end of the bed was raised by a simple contrivance to suit individual requirements; it was thus not necessary to move the patient himself. The gelatine solution (usually 5 per cent.) was introduced by means of an irrigator at a temperature of 48.50 deg. C, the injection being made as slowly as possible, and under a low pressure, since a rapid introduction of the fluid may give rise to tormina and tenesmus, which should be very carefully avoided in these cases.

The Development of the Muscular Layers of the Bladder. Particularly of the Muscular Structures of the Trigone and the Sphincter—Versari, (Annals des Maladies des Organes Genitourinaires) examined the muscular structures in the bladders of twenty-one fetuses. The writer found that the sphincter in the bladder consisted of smooth muscle fibres, which constituted a separate structure independent of the middle or circular layer of the muscular tunic of the bladder, as well as separate from the circular muscle-fibres of the urethra. The sphincter seems to be formed of a urethral and a trigonal portion. The urethral portion is in the form of a ring which surrounds the beginning of the urethra. The posterior bundles of the sphincter gradually spread upward over a part of the trigone and downward along the posterior wall of the urethra. The muscle layers of the trigone are formed at the base by a portion of the muscular coats of the ureters.

Heyman's Raed-Sack Method of Vaccinating for Bovine Tuberculosis.—Ebers (Centralbl. f. Bacteriologie) who has made extensive control-experiments with Behrings' vaccination for tuberculosis has found that the latter, while not worthless, is not sure enough to warrant its extensive use in badly infected herds. The writer has therefore been seeking for something to supplement the Behring method and now gives his preliminary report on the method of Heyman's of Ghent. The results are not exceedingly brilliant, but the method (which was first employed by Metschnikoff) used is extremely interesting. It consists in enclosing the dried, but live and virulent, tubercle bacilli in little sacs 3 cm. long by $\frac{1}{2}$ cm. in diameter, made from the delicate inner tube of the ordinary reed. These sacs, protected by gelatine capsules, are put into the sub-cutaneous tissue with the aid of a trochar, through an incision in the neighborhood of the shoulder. They pos-

sess the property of allowing a free passage of the lymph while being absolutely germ tight; so that the bacilli grow freely in them without being able to get into the surrounding tissues. This property is best demonstrated by suspending one of the sacs full of bacilli in a flask of sterile bouillon. Where this is done the bacilli grows and their products pass out and charge the bouillon with tuberculin, so that it produces a typical reaction in tuberculous animals, but it contains no living germs. Introduced into the subcutaneous tissue of cattle, these sacs of bacilli produce a slow, long continued vaccination with tuberculin without any danger of causing an active infection. Ebers finds, as Heymans' has done, that animals thus treated, while not absolutely protected against tuberculosis, develop a decided increase in the natural resistance to disease; both in the way of prevention and of cure, and hopes that by combining it with the quicker method of v. Behring much will be accomplished in combating the white plague in animals. Incidentally one notes that the disease is fearfully widespread in Belgium, some of the large herds showing as high as 95 per cent. of infected animals.

The Medical Aspects of Gastroenterostomy.—Leech, in the London Medical Lancet discusses 128 operations of gastroenterostomy and the results which he has obtained. Seventy-nine of these operations were for non-malignant conditions; 46 for malignant cases. The author used the posterior anastomosis in 74 non-malignant and in 33 malignant cases. Of the non-malignant cases, in 47 per cent. there was complete relief, in 10 per cent. no improvement, while there was a mortality of 23 per cent. In those cases which he classes as failures in the non-malignant group there was present persistent pain and vomiting.

Among the malignant cases, 32 per cent. lived over two months with marked relief, 22 per cent. lived over two months with no relief, while 46 per cent. died in less than two months after operation.

In the malignant cases he advises the operation of gastroenterostomy in early cases only where there is doubt as to the malignancy. In the non-malignant cases he advises this operation only in instances where medical treatment has not been of benefit.

On the Sensibility of the Internal Organs.—Mueller (Centralbl. fur Chir.) in an interesting article on this subject agrees with Lennander, and he shows that the majority of the internal organs—stomach, intestine, liver, spleen, lungs, brain—are insensitive to such external stimuli as the edge of a knife, the point of a needle, the

heat of a thermo-cautery, or squeezing with forceps.

His contention is that while an organ may be quite insensitive to chemical and mechanical irritation, it may nevertheless be sensitive to pain, and he believes that from all these organs sensory fibres pass to the brain through the sympathetic nerves. The writer states that apart from gross mechanical and thermal stimuli, others, such as disturbances in their blood supply in the form of ischæmia, exaggerated contractions of the musculature of the stomach and intestine, abnormal contents, and abnormal conditions of distension, may excite pain in the internal organs.

The author has investigated the subject in relation to each of the internal organs, and adduces a great deal of evidence in support of his contentions. In the case of the brain, for example, which has been demonstrated to be insensitive to mechanical interference, it has been alleged that all headaches have their origin in the dura mater; but this hypothesis sustained a rude shock when it was further shown that the greater part of the dura is similarly insensitive to mechanical irritation. He maintains that the brain itself can react with violent pains to chemical noxæ (alcohol, carbonic oxide, nicotine, bacterial poisons), to disturbances of the circulation (spasm of arterioles, embolism), to mental overstrain and to unpleasant psychical stimuli. Concerning the heart, while it is established that the cardiac muscle and its serous investments are insensitive to mechanical and inflammatory irritants, the myocardium is extremely sensitive to ischæmic disturbances. The writer regards the hypothesis of Lennander and Wilms as incapable of explaining the colic of lead poisoning, tabetic crises, and biliary and renal colic, or the sensitiveness of the liver, the female pelvic organs and the bladder.

He says that the sympathetic nervous system with its connections with the spinal cord not only serves to transmit psychical influences arising in the central nervous system to the vaso-motor mechanism, the sweat glands, the stomach, intestine and sexual organs, but, true to its name, is capable also of transmitting sensation from the internal organs to the brain.

Erysipelas in the New-born.—Herrgott (Ann. de Gyn. et d'Obst.) states that erysipelas in new-born infants is extremely grave and merits consideration. It generally shows itself by the presence of peritonitis, the tissues not showing the usual lesions. The author gives two illustrative cases, both of which were rapidly fatal. The grave feature in these cases is the absence of phagocytosis in the new-born. The

infection by the streptococcus is not antagonized by the leukocytes and hence it goes on to infectious peritonitis. In children over three months old phagocytosis occurs and the results are quite different. The lesions that exist in the skin differ materially from those of the adult. It is the subcutaneous tissues that are especially involved, and here most of the bacteria are found. The lymphatic vessels of the subcutaneous tissues are filled with them and they are very abundant in the loose cellular tissue which forms the outside coat of the arteries. Histological lesions are almost absent, the skin being only slightly edematous. This absence of reaction renders the disease much more grave. The lymphatic ganglia oppose no resistance to the germs. When an abscess forms the prognosis is much better because this shows that reaction is taking place. The progress of erysipelas in infants is very insidious. The germ enters by the solution of continuity at the umbilicus. Redness is not very intense, and the skin and subcutaneous tissues are indurated. A rapid evolution goes on to peritonitis and death. Treatment has very little effect.

Miscellaneous.

Some Complications of Chronic Otorrhea.

In the treatment of those cases of chronic otorrhea which are of long standing, an early examination should be made of the nose and naso-pharynx, and any pathological conditions—such as carious teeth, enlarged tonsils, adenoids, hypertrophied turbinates, a deflected nasal septum—should be dealt with on surgical principles, for while these conditions exist they will, by keeping up a catarrhal state of the nose and naso-pharynx, serve to accentuate and prolong the disease in the middle ear. The length of time during which conservative measures may be employed and the character of the treatment will depend upon the situation of the perforation. If it should be located in the upper half of the drum, disease of the ossicles will occur earlier than if it is in the lower half, and that itself will be a complication prolonging the disease and rendering it less amenable to conservative measures. If the perforation be situated in Shrapnell's membrane then ordinary methods of treatment, as by syringing the ear, will be futile, for the attic in these cases can only be reached by means of a special syringe whose nozzle has to be passed through the perforation. In these cases, too, surgical treatment may be ad-

vised much earlier than in other cases. An important point to bear in mind is that the longer the suppuration persists the greater will be the destruction of the contents of the middle ear. As the destruction progresses, so will the deafness increase, becoming, as time goes on, more and more difficult to improve, and also subjecting the patient to grave complications. H. H. B. Cunningham, British Medical Journal.

Carrot Soup for Sick Infants.

Moro found that newly born guinea-pigs fed on cow's milk succumbed in a few days to acute digestive disturbances as a rule. The syndrome suggested the alimentary intoxication of infants. The symptoms can be arrested if the young are fed with sliced carrots or allowed to suckle the mother. He has applied this experience in treatment of infants suffering from digestive disturbances, and reports excellent results in 48 cases in which the infants were fed on carrot soup. He boils the carrots and passes them through the finest wire sieve, adding about 200 c.c. to one liter of meat broth made from 500 gm. beef and bones. The carrot soup is made fresh each day and represents from 35 to 260 calories to the liter. This supplies nourishment, while it causes complete transformation of the intestinal flora. The French also use an aqueous decoction of several kinds of vegetables, but this lacks the special properties which render the carrot soup so beneficial, as Moro describes in detail.—Munchener Medezensische Wochenschrift.

Aconite and Belladonna: Their Antagonistic Action.

Dr. H. Speirs records a very instructive case which illustrates the antagonistic action between aconite and belladonna.

The patient was a man, aged 48, who swallowed by mistake half an ounce of aconite, belladonna, and chloroform liniment. After a short time he began to display his symptoms. The physiological action of the belladonna was most clearly observed. His pupils became so dilated that only the wide rim of the iris was visible. He was restless and acted like a maniac, followed by fits of unrestrained mirth. The patient had to be supported as he was unable to stand, owing to muscular weakness due to the action of the aconite. The pulse was rapid, small, and thready. However, the patient recovered in spite of the enormous overdose of both these drugs.

The depressing action of the aconite was annulled by the stimulating action of the belladonna.

The conclusion drawn from this case is

that hypodermic injections of atropine should be administered in all cases of aconite poisoning.—British Medical Journal.

Opsonic Index in Pulmonary Tuberculosis.

The reports of the results and researches of the various degrees of pulmonary tuberculosis at the Crossley Sanatorium, were made by Drs. Smith, Radcliffe, Elder, and Crossley. They adopted the technic of Wright and Douglas, and in their charts it is shown that there is an appreciable variation in the opsonic power from hour to hour, although the patients were resting. Finally they concluded that more than one estimation of the index is to be made whether an injection of tuberculin should be given or not. According to their suitability for inoculation, they classify the different types of patients: (a) Those showing extreme and rapid oscillations in opsonic power. In such cases tuberculin treatment would be unfavorable, because the auto-inoculations were so marked even at rest. (b) Those with persistently high level indices. (c) Those with low indices. In these cases the injections yielded excellent results. The authors also carried out researches which showed that the agglutinins and opsonins in cases of phthisis follow a similar course. The opsonic estimations were more delicate and recorded slighter variations.—The London Lancet.

Action of Arsenic on the Red Blood Corpuscles.

Various authors have come to the conclusion that, because arsenic seems to have no direct effect in increasing the production of red blood corpuscles, its beneficial results must come from its specific action on the parasites causing the disease for which it is given. In a series of experiments in which he has mixed arsenic in a suspension of blood corpuscles, the writer shows that arsenious acid is fixed to the red blood corpuscles, and that this process takes place very rapidly, and, furthermore, that it protects these corpuscles against the hæmolytic action of distilled water. He believes that in some way the arsenic affects the stroma of the red cells in the hæmoglobin, but as this stroma is known to contain lecithin and cholesterin, he believes that these two substances should be given a thorough trial in every case of pernicious anæmia, especially as in the present knowledge of this disease no drug appears to have any permanent beneficial effect.—Gunn, British Medical Journal.

Psychology of Neurasthenia and Hysteria.

The author regards the psychologic distinction between neurasthenia and hysteria as profound. In neurasthenia there is an exhaustion or poisoning of the higher cerebral or spinal nerve centers. In hysteria there is no question of exhaustion, but there is aberration and morbid action of that part of the unconscious mind (*vis medicatrix Naturæ*) which presides over the functions and nutrition of the body, and which produces in hysteria, unconsciously and against the patient's will, morbid phenomena which the mind consciously is wholly unable to produce, even if it wishes—such as, for instance, reversed peristalsis, high temperature, local tumors, etc. Hysteria is thus parallel to insanity though quite distinct from it, the radical difference being that the sphere of the former is the unconscious mind and that of the latter the conscious mind.—Schofield, British Medical Journal.

Euphorbia: Its Value in Asthma and Bronchial Catarrh.

Artault recommends the use of euphorbia in the treatment of asthma and bronchial catarrh. This drug acts directly on the cardiac and respiratory centres and exerts a reflex action upon the naso-pharyngeal branch of the pneumogastric nerve. It has a decided effect upon asthma by modifying the secretions and thus alleviating and suppressing the attacks. The drug can be administered either in the form of an extract, tincture and decoction.

Dose of extract being $7\frac{1}{2}$ to 30 grs. per day; the tincture being 30 to 60 minims; and decoction 1 teacupful 3 or 4 times a day. London Medical Lancet.

Adrenalin Treatment of Infective Diseases.

Hodick recommends in the treatment of septic peritonitis marked by collapse and low blood pressure, an injection into the median basilic vein of six to eight drops of a solution (1 in 1000) of the extract of adrenalin added to about one and one-half pints of physiological saline solution. These injections worked marvelously in Heidenhain's clinic during the past two years and they have been injected after abdominal operations, thus preventing the post-operative effects such as cyanosis and low pulse.—British Medical Journal.

Antituberculous Serum in the Treatment of Tuberculosis.

Jacobson reports eleven cases of tuberculosis treated with Marmorek's antituberculous serum. This serum was administered

subcutaneously and by rectum, except in a case of tubercular cystitis in which the serum was introduced directly into the bladder. Two or three weeks intervened between two series of injections. After the injections the beneficial effects took place gradually and the prominent symptoms such as cough, expectoration, and dyspnoea were abated.—British Medical Journal.

Diet in the Treatment of Diabetes.

Kolisch considers the dietetic treatment of severe diabetes as the most important. He advocates: (1) The intake of food should be reduced to a minimum, because the more food that is injected the more glycosuria will be present. (2) The proteids should be reduced in quantity, because large quantities of proteids are most irritating to the plasma cells and most liable to cause breaking down of the cell with increased glycosuria. (3) The diet should contain as much of carbohydrates as can be taken without increase of glycosuria. The author has found that the patients will often put on weight and strength on such a vegetarian diet. The diet is made more liberal as the glycosuria diminishes and believes that the number of calories needed is less for a patient than a normal person if the diet is suitably chosen.—British Medical Journal.

Low Birth Rate is Alarming France.

France has painfully but successfully regained her old position among the nations of Europe she is today confronted with a danger the result of which, unless a remedy be discovered, is mathematically certain, and is only a question of time. Dr. Jacques Bertillon gives under the heading "The Man-devouring Town" some very startling statistics in *Le Journal*. Not only, he tells his readers, "is the birth-rate in French towns rapidly dwindling, but in most of them more of the people depart this life than enter it." It is not that the death rate is raising, but that the birth rate is incredibly low and steadily diminishes.

Dr. Bertillon's researches extend over twenty years. In Paris, between 1887 and 1890, the average annual number of births was 58,000. The total has fallen in 1907 to 50,811, although the census of these twenty years shows an increased population, mainly due to influx from the country of half a million. In 1887-1890 the birth rate was twenty-five per thousand inhabitants; to-day it is between eighteen and nineteen. In nearly all the large towns more die than are born.

A Study of Meningeal Reactions in a Case of Hereditary Syphilis.

Ravaut and Darre give a brief bibliography of the subject and report an interesting history of a case observed from birth until an apparent cure at the age of three years. The mother was syphilitic and the child had mucous patches, etc., at three weeks. Inunctions were begun at once. She did well for three months and then began to lose weight and developed opisthotonos, retracted abdomen. Kernig's sign, slight convulsions. Physical examination was in all other respects negative, temperature subnormal. Ten c.c. of spinal fluid were withdrawn—under greatly increased tension. There was some improvement, and three days later another 10 c.c. were withdrawn, followed by great improvement. This fluid showed 30 lymphocytes to the 1-12th immersion field. During six months ten lumbar punctures were made on account of five attacks of meningeal irritation. They showed a progressive decrease of the lymphocytosis and the crises became less severe. From that time on the child developed normally, and during the next three years five spinal punctures were made, each yielding normal fluid.

They claim two great uses for this repeated spinal puncture; first, marked relief of the acute symptoms; second, a positive guide for the mercurial treatment in the progressive decrease in the spinal lymphocytosis.—*Gazette des Hospitaux*.

Treatment of Puerperal Infection with the Lactic Acid Bacillus.

M. A. Brindeau has made use of a bouillon of the lactic acid bacillus cultures mixed with sterilized milk sugar, as a remedy for puerperal fever. The remedy depends on the fact that the streptococcus will not grow in an acid medium and as the lactic acid bacillus is nonpathogenic it is used to produce an acid medium. The bouillon is used for vaginal and uterine packing and injections, no antiseptic injections being given either before or after its use. He gives the history of three cases treated in this way with recovery. The condition of the vagina and uterus improved rapidly and the fever was lessened. No bad results were observed and all three patients recovered. The author advocates further use of this remedy until a thorough test of its efficiency has been made.—*Bulletin de la Societe d'Obstetrique de Paris*.

The Inhalation of Oxygen to Prevent Nausea from Chloroform.

M. Spargella finds that the inhalation of oxygen immediately after the termination of anesthesia is of decided advantage in

Persistent Coughs

too, often indicate inability of the organism to re-establish a nutritional balance. Here is where

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has its greatest value—the restoration of metabolic equilibrium. This it accomplishes by improving digestion, increasing absorption and assimilation, and promoting functional activity throughout the body.

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preventing vomiting. He has tested it in a considerable number of cases. Nausea was slight and vomiting absent. He explains the effect of the oxygen thus; the vomiting is produced by excitation of the cortical and spinal nervous centers, the result of an active hyperemia and a bringing to the brain of a larger amount of chloroform than it can bear. The oxygen becomes combined with a portion of the poison, and lessens the excitation of these centers by the chloroform, and thus decreases the reflex vomiting.—*La Riforma Medica*.

The Frequency of Tubercular Infection During Infancy.

Schilbach arrives at the following conclusions: The frequency of tuberculosis in infancy does not increase from month to month, as hitherto assumed, but there is, on the contrary, a retrogression toward the end of the first year, and again of the second year of life. These dates are offset by two just preceding chief periods of infection—the so-called "cradle" infection during the first three months, and the creeping, or filth, infection about the end of the first year. There is, however, a possibility of infection at other times as well. Artificially nourished infants are the first to fall victims to tuberculosis; next in order follow those which receive mixed food, and finally the breast fed babies. Mother's milk accordingly would seem to possess a protec-

tive power against tuberculosis.—*Munch. Med. Wchschrift*.

Acute Circumscribed Edema of the Periosteum.

Herz (*Zentralbl. f. inn. Med.*,) mentions under the name "angio-neutrotic pseudo-periostitis" a form of acute circumscribed edema, which, but for its evanescent character, and tendency to relapse, closely stimulates periostitis. The bones affected in the writer's cases were invariably constituents of the thorax, and the patients without exception were the subjects of some cardiac neurosis. The swellings always occurred in the arena in which the subjective cardiac symptoms were most pronounced, and usually during an acute exacerbation.

The affection has not been previously described, and is not common.

Case 1. A neurotic woman, aged twenty-six, had attacks of cardiac pain and palpitation with dyspnea. There was no organic disease. When the writer saw her there was a tender, hard, doughy swelling at the sternal end of the left fifth rib. During a cardiac attack this swelling was said to be the seat of the most severe pain. A year previously it had been mistaken by a well-known surgeon for costal caries, mainly because there had been fatal cases of tuberculosis in the family. An operation was refused on the ground that the swelling occasionally disappeared completely. Though four years have since elapsed since no operation has been required.

Case 2. A woman, aged forty-two, had attacks of cardiac palpitation, dyspnea, and precordial oppression of such severity that she had kept her bed for months. Some years before the writer saw her aneurism of the aorta was diagnosed, iodides had been taken uninterruptedly. The heart was normal,

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and the diagnosis of aneurism at first appeared inexplicable. But when an examination was made during a cardiac attack a tumor was found of the size of an apple. This was situated to the right of the sternum over the second and third ribs and intervening space, and was tender and apparently exceedingly painful. The heart was acting tumultuously, and the violent pulsations were communicated to the tumor. The swelling rapidly subsided under hot fomentations, and the cardiac neurosis was finally cured by suggestion. There had been no relapse three years later.

Case 3. A woman, aged forty-five, had advanced exophthalmic goiter, with severe anginal attacks. The pain was localized, not in the heart itself, but in the upper part of the sternum, which was said to swell during each attack. When the writer saw her the pulse was irregular and uncountable. The entire sternal region was swollen, tender, and of a hard, doughy consistence. The surface temperature of the swelling was considerably higher than that of the surrounding skin. Leiter's tubes, through which hot water circulated, were applied, and the pain was relieved.

Case A. A male morphinomaniac, aged forty-three, had attacks of paroxysmal tachycardia in which the sternum became swollen exactly as in the previous case. The only treatment required for these periosteal swellings is the application of heat.

Phenol: Its Value in Tetanus,

Dr. Cesar Allevo, has obtained satisfactory results from the use of carbolic acid in the treatment of tetanus. He reports a case of tetanus in a middle-aged lady, who contracted this disease as a result of cutting a corn. She manifested all the symptoms associated with tetanus. The treatment consisted in injecting hypodermically a two per cent. solution of carbolic acid, followed by another injection

the next morning. A dose was again repeated at 4 and 8 p. m. Although some of the symptoms such as trismus and contraction of the neck were alleviated, the headache and photophobia still remained. After this treatment for 5 days all the distinctive symptoms of tetanus had disappeared. The author also cites a number of other cases which had been cured by this drug.—The London Mechanical Lancet.

Treatment of Blennorrhoea of the New Born with Beef-Serum.

Gilbert (Munchener medizinische Wochenschrift) has applied the beef serum treatment of suppurative processes, recently published by Muller and Moro, to ophthalmia neonatorum and reports his experience in the management of eight cases of this disease. The conjunctival sacs are washed out every two hours with the serum. The latter is kept on ice and is prepared fresh every twenty-four hours. Gilbert is of the opinion that the use of the serum tends to shorten the attack and advocates its general employment.

Detection of Tubercle Bacilli in Pleuritic Effusions.

Zebrowski (Deutsche med. Wochenschrift) suggests a modification of Jousset's method, which consists of digesting the clot and examining the residue. He prevents coagulation by adding an equal amount of a 0.5-per cent solution of sodium fluoride to the effusion. This mixture is then set aside in a cool place for twenty-four hours, and the sediment then centrifugalized and stained by Ziehl's method. In 83 per cent of the cases of secondary pleurisy he found the tubercle bacillus, and in 55 per cent of the primary cases.

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Acute Hemorrhagic Nephritis, after Mumps, in a Seven Months' Old Infant.

Jelski (Arch. f. Kinderhk.) describes the case of a seven months' infant who had a moderately severe parotitis. Two weeks after the onset it was noticed that there were bloody specks on the diaper. Examination of the urine showed the picture of

an acute hemorrhagic nephritis. Despite energetic treatment the child died with a picture of uremia. Careful search of the literature showed the author that the cases of nephritis following mumps in childhood have occurred in older children. It is noteworthy that three other children in the family, who had mumps at the same time, showed no complications.

The Treatment of Leucorrhoea of Pregnancy.

Siredey (La clinique) formulates the treatment of leucorrhoea of pregnancy as follows. Administer a vaginal injection of sterilized or lukewarm boiled water, to be followed by an injection of two pints of lukewarm boiled water containing two tablespoonfuls of dry yeast. Afterwards introduce a tampon, attached by a thread, which has been soaked in a mixture of equal parts of yeast and boiled water; renew once a day. In place of the foregoing there may be injected twice daily boiled water containing a tablespoonful of Labarraque's solution, or a decoction of marshmallow root and poppy heads to each quart of which have been added, sodium bicarbonate, five drachms, and sodium chloride, two drachms.

Some Points on the Experimental Production and Control of the Vascular Atony of Surgical Shock.

Mummery and Tymes (British Medical Journal) after a careful experimental study conclude as follows:

In fully anesthetized animals non-destructive manipulations of abdominal viscera are more productive of shock than are gross injuries.

Such manipulations produce shock most rapidly when they implicate the parietal peritoneum, the peritoneal ligaments, or the mesenteries. Shock is more readily produced under chloroform than under ether.

In every shock hypodermatic injections are but slowly, if at all, absorbed into the blood stream.

In severe shock intravenous injections of adrenin, and of extract of the posterior lobe of the pituitary body, raise arterial pressure to a greater extent than in the normal state.

A singular injection of the latter influences arterial tone for upwards of an hour without producing abnormally high arterial pressure.

This influence is sufficient to enable considerable recovery from shock, and does not interfere with subsequent injection of adrenin, if that be desirable.

They have seen no value in ergot or any of its preparations in the treatment of shock.

Left Pyelonephritis from the Gonococcus in a Child of Six.

Magrassi (Riv. di Clin. Ped.) describes a case of pyelonephritis which occurred in a child of six years who had had a cystitis from gonorrheal infection. The extreme rarity of the condition in a child renders the case one of interest. When the case was first seen she had a rounded tumor of elastic consistency in the left colic region, with turbid, acid urine containing albumin, pus cells, a few blood cells, and flattened epithelium. The child was anemic and cachectic and suffered from attacks of renal colic. He found by examination and isolation of the urine of each kidney that the right kidney was in a normal condition and he removed the diseased kidney, which was the seat of an abscess and marked granulations of the pelvic lining. The child made a good recovery from the operation. When seen for another trouble some time afterward, she was well and the kidney was functioning normally.

The Treatment of Arthritis Gonorrhoeica of the Large Joints by Bier's Hyperemia.

Bachtzner (Deutsch Zeitschrift f. Chirurgie) in a series of 40 cases splendid results are shown. Nothing new is developed as regards technique

the rubber bandage being used as in acute infection for 20 to 22 hours out of the 24.

He calls attention to the rapid relief from pain afforded by this treatment, and claims that not only does it shorten the course of the disease, but gives functional results very much better than the older methods of treatment.

Scopolamine-Morphine and Chloroform Anaesthesia.

Jones (Folia Therapeutica) describes his method of administering scopolamine-morphine and chloroform to obtain anaesthesia as follows: On the night before the operation (which takes place at 9:30 next morning) 1-100 grain of scopolamine and 1-6 grain of morphine are injected the last thing. On the morning of the operation this injection is repeated at 7 o'clock, after the bowel has been freely and thoroughly emptied. At 8:30 a. m. an injection of 1-100 grain of atropine and from 1-36 grain to 1-60 grain of scrychnine is given; sometimes the atropine is omitted. The chloroform is administered by the Vernon Harcourt regulator.

The Prophylaxis and Treatment of Ophthalmia Neonatorum.

Greif (Die Therapie der Gegenwart) believes Crede's solutions are unnecessarily strong—1 to 5 per cent. That they sometimes cause ulceration, and that the suffering caused is unwarrantably prolonged. His further reasons against the method are a stubborn turbidity of the cornea, which occurred at times, and the fact that the stronger solutions did not penetrate as perfectly as the weaker ones. A solution of 1 to 1,400 of silver nitrate is sufficient to kill the gonococci quickly. Therefore, it is recommended that a 1-4 per cent. solution be used in infected cases, and a 0.1 per cent. for prophylactic purposes.

It should be recollected that a number of children are not infected at birth, but by unclean handling afterwards.

Treatment of Displacements of the Pelvic Viscera.

Fothergill (Jour. Obst. and Gyn. Brit. Emp.,) recommends for classical prolapse anterior colporrhaphy with union in the middle line of the parametric and paravaginal tissues; posterior colporrhaphy and perineorrhaphy. The author favors ventrofixation in addition to the above, if the anterior colporrhaphy does not support the uterus in a position of anteversion. For cystocele and vaginal prolapse he performs anterior colporrhaphy and perineorrhaphy. For retroversion demanding treatment he advises Alexander's operation as an alternative for pessary if the uterus is movable; laparotomy, separation of adhesions, treatment of appendages and securing of uterus in anteversion, if it is fixed.

Calmette's Ophthalmo-reaction to Tuberculin.

Hutchinson (Dubl. Jour. Med. Sci.,) states that this is a simple, harmless and efficient means of diagnosis. Its limitations are few. It is useless, for diagnostic purposes, in the case of children under one year, even those born of tuberculous mothers. This is an argument in favor of the theory that a child is never born with tuberculosis. Infants of two years old react in the proportion of 3-42 per cent., and the percentage materially increases with age. Secondly, it is almost useless in cachectic, moribund, or very advanced cases of pulmonary tuberculosis, and in cases of acuteiliary tuberculosis.

The importance of lecithin to the organism is demonstrated by its thorough distribution throughout the animal and vegetable kingdoms and its value as a therapeutic agent is being appreciated more fully day by day as experimental work progresses and opens up new fields for its usefulness.

Lecithin has been given with satisfactory effects in anemia, rachitis, tuberculosis, diabetes, and in nervous breakdown, and recent reports show that much is to be expected of it in syphilis and locomotor ataxia. In the latter ailment pains were alleviated and other signs disappeared, and one author comes to the conclusion that the loss of lecithin due to syphilitic toxin might bring on general paralysis and phthisis.

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Lecithol is superior to the hypophosphites, glycerophosphates and other inorganic combinations, which are not converted into lecithin in the system and which are excreted as phosphates.

Safe Antiseptics in Gonorrhoea.

Tincture of iodine irrigations in solution of from one to four drachms to a quart of hot water is said to be one of the safest and best antiseptics that can be used in gonorrhoea. The strength of the solution and number of irrigations a day depend upon the stage of the disease. To keep the urine bland and non-irritating sametto should be administered in teaspoonful doses three or four times daily throughout the treatment. In case of extreme acidity of the urine one of the potassium salts will be found helpful.

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Antilormin as a Disinfectant.

Uhlenhuth and Xylander record the properties of antiformin as an excellent disinfecting preparation. In solution it forms a yellow, clear fluid, alkaline in reaction, having an odor resembling soda and chlorine. This agent consists of a mixture of alkaline hypochlorite and alkaline hydrate and may be used as an oxidizing agent due to the action of the hypochlorites. It is extremely useful for the disinfection of the stools from patients suffering with typhoid and it also has the power to dissolve hard, inspissated fecal material which renders it necessary in urinals, waterclosets, stables, etc. This disinfectant in a 2 to 5 per cent. solution kills a majority of the bacteria (cholera, typhoid, paratyphoid, coli, pestifer, suiscepticus, staphylococcus, streptococcus, meningococcus and pneumococcus).—British Medical Journal.

The Sinusoidal Hydro-Electric Bath.

Harris (British Medical Journal) reports that he has used the sinusoidal current in full bath treatment for specific forms of disease. At his hospital they have made considerable employment of the sinusoidal bath treatment in tubes dorsalis and in other forms of spinal disease with beneficial results; also in the treatment of muscular paralysis due to nervous injuries.

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Picric Acid in Burns of the Eye.

Burns of the eyelids and conjunctiva, especially by lime, are of frequent occurrence, and any practitioner may be called upon to treat them. It has long been known that a saturated solution of picric acid is one of the best applications to a skin burn, relieving the pain in a marvellous manner and acting as a powerful antiseptic. A. Fortunati, of (Annali di Ottalmologia, vol. xxxvi, 1907, fasc. 12, 9 to 11, p. 746 to 770, with plates), after making experiments with rabbits' eyes, and after long clinical experience, warmly recommends picric acid for treating burns of the conjunctiva and cornea, especially by chemical agents, including lime. He finds that a 2-per-cent. ointment—picric acid, 20 centigrams to white vaseline (neutral reaction) 10 grams—is better than a watery solution. He applies it twice or thrice in the day after the instillation of a few drops of cocaine. The results are surprising, especially in the direction of relieving pain. Symblepharon is infrequent after the picric acid treatment.—British Medical Journal.

Facts vs. Fancies.

You can prescribe bichloride, carbolic, permanganate, hydrastis, tannin, zinc or lead, for Leucorrhea or Gonorrhea, if you want to, but you can't get any more positive results, effects, quicker but harmless, no matter what you use, than Tyree's Antiseptic Powder will give you. It comes as near absolute perfection as material and skill can make it. Nothing can be put into a preparation for inflammation of the vagina and cervix to make it more desirable and satisfactory than is found in this one. You get the best antiseptic astringent and detergent known, all in one so modified by proportion and treatment that their individual objections have been eliminated. The bland, gentle and quick effect of this powder is due in part to the selection of chemical agents as near non-corrosive in their natures as possible, treating them by a process of trituration by which a degree of harmless activity is acquired almost equalling that of the more powerful corrosive agent. Actual clinical tests have proven this statement to be absolutely correct in more than two thousand cases. Being cheap, cleansing, harmless, and very soluble, it can be used in such quantities as to insure more positive results than could be expected from an agent which must be used with precaution. A trial package will be mailed free of charge to physicians if they will their name and address to J. S. Tyree, Chemist, Washington, D. C.

Sonnenburg (Therap. d. Gegenwart,) says that in obscure appendicitis, depends on the leucocytes to distinguish an acute inflammation of the appendix from colics of various kinds, typhoid, and other conditions. In many cases there will be symptoms of appendicitis when only an enteritis is present. It is here that a dose of castor oil is indicated, for if the symptoms do not disappear when the bowels are evacuated, the patient should be operated upon immediately. All other symptoms of course be considered and the leucocytes should always be counted. The oil should only be given where the clinical diagnosis is simple or catarrhal appendicitis. The writer has treated 111 cases by this method, and operation necessary in only four.

Acute Inflammation of the Antrum of Highmore Complicating Influenza.

Jones (Australasian Medical Gazette) says a man of fifty-nine consulted him on account of a severe pain and sensation of bursting or fulness in the

right side of the face, coming on two weeks after an attack of influenza, which had been followed by a severe catarrhal condition of the air-passages, with spasmodic cough. When first seen he looked ill, and was suffering from a severe coryza. The pain and tenderness was most marked over a swelling in the zygomatic region, coughing or any attempt to clear the nose very much increasing his discomfort. Transillumination of the face gave darkness on the right side; pulse 100; temperature 101.5 deg; tongue very dirty. The right side of the nose was blocked by muco-purulent matter, which was evidently blocking the hiatus semilunaris, for on its removal under cocaine fully 1-2 ounce of muco-purulent matter flowed from the antrum, giving the patient immediate relief. Drainage was provided for by keeping the head on the opposite side.

The Influence of Alcohol on Digestion.

Kast, in his alcohol experiments upon dogs operated upon after the method of Powlow, also on a girl with a gastric fistula following resection of the esophagus, concluded that alcohol increases the amount of gastric juice, but does not affect the percentage of hydrochloric acid. The amount of pepsin is reduced.

When alcohol was administered in doses of ten per cent. or less, there was no noticeable irritation. In doses above twenty per cent., pronounced local irritation was produced.

When dilute solutions of alcohol were used continuously, the first result was hyperchlorhydria, then catarrh or acid gradually decreasing.—Archiv. f. Verdauungs Krankheiten.

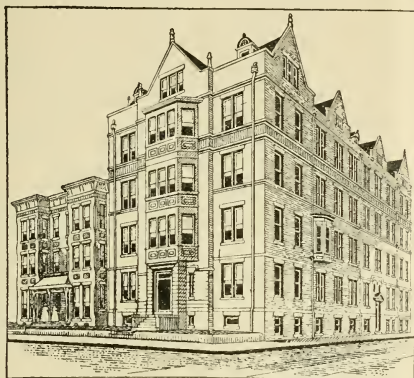
Alimentary Poisons a Cause of Atheroma

Loeper has studied the processes of calcification and atheroma caused in the arteries of animals by certain alimentary poisons. The writer concludes from the studies that if the diet could be made strictly atoxic from first to last, the atheroma could be avoided. The lesions found were always calcifications of the middle layer of the vessel wall. There was not noted any tendency to sclerosis. Loeper observed that in rabbits oxalic acid was markedly active in inducing atheroma. The administration of lime salts also favors experimental atheroma. He calls attention to the fact that tomatoes, rhubarb, spinach, tea, coffee, and cocoa contain considerable quantities of oxalic acid. The last three also contain theobromin and other vascular poisons. Loeper has induced atheroma in rabbits by the ingestion of theobromin acetate.—Arch. des Maladies du Cœur des Vaisseaux et du Sang, Paris.

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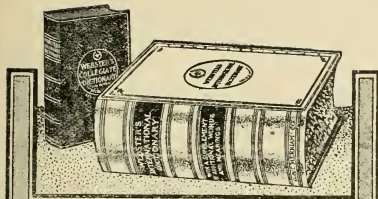
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Analgesia in Obstetrics and Gynaecology.—Sinclair, in *The London Medical Lancet*, mentions the various methods of relieving pain in obstetrical practice and suggests the advisability of employing a combination of morphia and alcohol and the local use of cocaine if necessary, varying the dosage of each according to the habits and racial temperament of the patient. For such operations as curettage in puerperal sepsis he would avoid chloroform and ether unless necessary, as the anæsthetic may turn the scales against the weakened patient. The following method will be found sufficient for curettage: About three-quarters of an hour before the operation the patient receives a full dose of morphia hypodermically—a quarter of a grain, more or less, according to her bulk. Half an hour or 20 minutes before the time appointed for operation she is given about two or three fluidounces of whiskey or brandy disguised with licorice and diluted. If she is accustomed to alcoholic beverages, as most hospital patients are, she must get more. By the appointed time, when everything is ready, the most timid patient has become apathetic, but if there is laceration of the perineum it is well, as a preliminary, to mop the surface which has to be cleansed with a solution of cocaine, eucaine, or novocaine.

The Diagnosis of Hæmorrhagic Pleuritis.—Morano (*Giornale Internazionale delle Scien. Med.*) remarks that hæmorrhagic pleurisy may be due to tuberculosis, malignant tumors, the hæmorrhagic diathesis, interstitial nephritis, hepatic cirrhosis, acute articular rheumatism. As these latter diseases are easily diagnosed by their special symptoms, it remains to discuss the diagnosis between hæmorrhagic pleurisy due to tuberculosis and that due to malignant tumors. Tubercular hæmorrhagic pleurisy may be due to pulmonary tuberculosis or to primary tuberculosis of the pleura. Dieulefoy has recorded cases of this nature occurring both at the onset and during the course of chronic tuberculosis. The writer divides them into three groups: 1. Hæmorrhagic pleurisy due to acute general tuberculosis; miliary tuberculosis invades the whole organism, but at times a pleurisy may be the first symptom to attract attention; this may be dry or exudative, and when it is the latter it is generally hæmorrhagic. 2. It may be due to chronic tuberculosis. In this case the bacilli are carried through the lymphatics from the apex to the whole organ; they reach the visceral layer of the pleura, and thence, by direct contact, the parietal layer. Here it may set up an adhesive pleurisy, or it may cause a fibrino-plastic pleurisy, either dry or sero-

fibrinous, or it may produce a degeneration in the vessel walls, leading to their rupture, and so to hæmorrhagic pleurisy. The pleurisy occurring during the course of chronic tuberculosis is less commonly hæmorrhagic than in acute miliary tuberculosis. 3. The hæmorrhagic exudate may be due to a primary tuberculosis of the pleura, and begin as an ordinary acute pleurisy. In deciding to which of these classes a given case of hæmorrhagic tuberculous pleurisy belongs, it is necessary to remember that in acute tuberculosis the exudate is rather abundant, and after tapping the fluid rapidly re-accumulates. Charcot says that pleurisy in this case constitutes only an epi-phenomenon of the acute tuberculosis, which follows its rapid and fatal course. In chronic tuberculosis the tendency is for the exudate to lose its hæmorrhagic tint and gradually to cease to be reproduced, the layers of the pleura becoming adherent while the tuberculosis pursues its course. In primary hæmorrhagic pleurisy the diagnosis is more difficult; the clinical symptoms are only those of a sero-fibrinous pleurisy, and to decide the nature of the exudate it will be necessary to resort to injections of tuberculin or of the pleuritic fluid into animals, since the microscopical examination for the tubercle bacilli is not always reliable.

Relation of Mycosis Fungoides to Infection and Malignancy.—Bushnell and Williams say that the relation of mycosis fungoides to the infectious granulomata is seen in (1) the diffuseness and absence of capsule formation of the growth; (2) the presence of lymphoid cells which resemble the proliferating cells and lymph follicles, of plasma cells, and of mast cells, as seen in the granulomata; (3) the numerous thin-walled vessels; (4) the necrosis of large areas of growth. The relation of mycosis fungoides to sarcomatosis is seen in (1) the rapidly fatal course, when once evolutionary tumor formation supervenes (the duration of the disease being ten or twelve years in our case, and the evolutionary stage four months—a "malignant granuloma"); (2) the bulk of the tumors, and the arrangement of cells and fibers as in lymphosarcoma; (3) the presence of metastases in brain, kidneys, adrenals, retroperitoneal glands, dura mater, liver, and spleen in recorded cases; (4) the close relation that exists between leucorrhea, infectious follicular vaginitis, balanitis, and lymphoid sarcomata of bitches, and its parallel in this disease and the diffuse character and malignant course of the lymphomata (lymphocythemia). Here it may be noted that persistent dermatitis is the precursor of "Paget's disease" (carcinoma of breast, scrotum,



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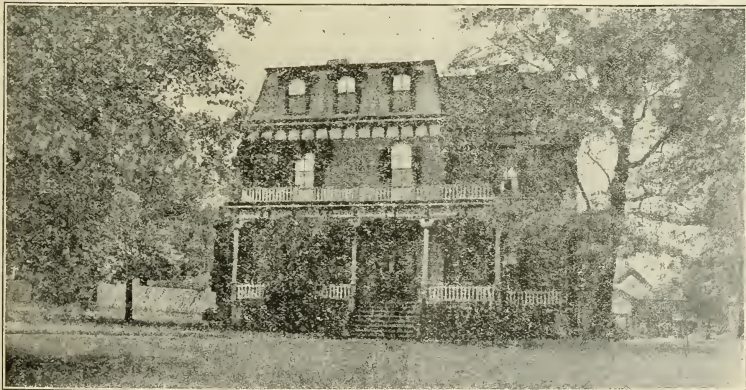
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vulva and umbilicus), and that lobulated warty condylomata of dogs arise from irritation. There is a clear resemblance of mycosis fungoides, despite its inflammatory structure, to "infectious sarcoma" of dogs. The latter is characterized by the presence of uniformly large, round, pale staining mononucleated cells with nucleoli, not arranged as alveoli, but in cords of diffuse areas; the blood-vessels are moderately developed. The surrounding tissue is displaced outwards, and is free from signs of inflammation. Large areas may necrose. It is highly infectious, produces metastases, and the transference of living cells is necessary to secure growth.

Perforation of the Living Child.—Katz (Monatschr. f. Geburtsh. u. Gynak.) upholds craniotomy in certain cases when it is impossible to terminate labor otherwise. The cases are those in which the patient has been under the care of attendants who have examined with unclean hands, or caused injury to the bladder or uterus. Such cases are unfavorable for operation of any kind, and perforation gives the best results. The mortality of Cæsarean section, or symphyseotomy, should be nil if the cases were seen before the onset of fever, but in hospital practice this is not always the case. Kratz gives the results at the Mannheim Maternity as follows: Of 6935 cases delivered, there was twenty-six craniotomies, —0.37 per cent.; maternal mortality, 7.69 per cent. After Cæsarean section the mortality has been 10 per cent., as has also been that after symphyseotomy. Katz refers to the prejudice among the public against Cæsarean section, in contrast to that of perforation. The indications for craniotomy in the twenty-six cases referred to were—rise of temperature, bad general condition of the mother, eclampsia, threatened rupture of the uterus. The writer says the operation of Cæsarean section should be impressed on patients as the best method of obtaining a living child, even where the indications are only relative as being the surest method of obtaining a living child; although there will always remain many cases that must be terminated by craniotomy.

Unlabial, Polypoid, Edematous Elongation of the Cervix, a Complication of Labor.—Rouvier (L'Obst., August) states that edema of the cervix during labor may be present to such a degree that a portion of the cervix in shape resembling a polypus descends before the head of the fetus. This necessitates in most cases some intervention to crowd back the mass into the pelvic cavity during the contractions or to deliver by forceps or version. A slight degree of

this condition which will undergo a return into the pelvis is often seen, but the advanced degree in which the mass of variable size appears like a polypus is exceedingly rare. The author had in his hospital practice a remarkable example of this difficulty. The seat of the elongation is the anterior lip of the cervix. The cause is interference with the circulation in the cervix by the pressure of the head. When dilatation is slow it is more apt to occur. It is sometimes associated with pelvic contraction. In some cases the edematous lip of the cervix tears away from the rest of the cervix; in some it remains in the vagina; in others it appears below the vulvar orifice. It is of a livid, violet color, and when the capillaries become ruptured so that there is extravasation of blood within it it is blackish in color. The patient suffers severe pain in the elongated portion. The elongation may persist for some time after the delivery and when it does so may need to be removed by operative procedure. It may be confused with prolapsus of the mucosa of the vagina, with a vascular polypus, with a fibroid tumor of the cervix, and with a portion of the placenta. In severe cases the contractions become irregular and sometimes cease and inertia uteri ensues. In such cases the life of the child is endangered by the prolonged pressure to which it is submitted. Early diagnosis, spontaneous resolution, or separation of the tumor are favorable to the mother. When the amniotic sac has not ruptured and the contractions are weak it is justifiable to endeavor to put off labor. After rupture, dilatation should be facilitated. Attempts should be made to support the prolapsed portion and push it up between the pains. It may be necessary to aid delivery by version or forceps, and the lip should be supported between the tractions. After delivery the tumor disappears in most cases in a few days.

Retention of Urine in Typhoid Fever in Children.—Canjoux and Ros (Ann. de Med. et Chir. Inf.) describe two cases of retention of urine in typhoid fever in children, and state that this symptom is comparatively frequent. It may occur when there is merely hebetude as a result of the general grave condition, or in cases with decided cerebral symptoms. Its cause may be paralysis of the muscular tissue of the bladder, vesical anesthesia, or spasm of the sphincter. When there is a medullary congestion in typhoid acting on the vesico-spinal center there may be paralysis of the bladder. Hypertension in the spinal canal may be an important cause. This may be relieved by lumbar puncture with withdrawal of fluid. In cases of typhoid we

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Annual meeting at St. Louis, Mo., Dec. 15-17, 1908.

W. D. Haggard, M. D., Sec., Nashville, Tenn.

Howard A. Kelly, M. D., Pres., Baltimore, Md.

SOUTHERN MEDICAL ASSOCIATION.

Annual meeting at Atlanta, Ga., Nov. 10-12, '08.

Raymond Wallace, M. D., Sec., Chattanooga, Tenn.

Henry H. Martin, M. D., Pres., Savannah, Ga.

MEDICAL ASSOCIATION OF THE SOUTHWEST.

Annual meeting at Kansas City, Mo. October, 1908.

F. H. Clark, M. D., Sec., El Reno, Okla.

T. E. Holland, M. D. Pres., Hot Springs, Ark.

TRI-STATE MEDICAL ASSOCIATION OF THE CAROLINAS AND VIRGINIA.

Annual meeting at Charleston, S. C.

J. Howell Way, M. D., Sec., Waynesville, N. C.

Albert Anderson, M. D., Pres., Raleigh, N. C.

MEDICAL ASSOCIATION OF THE STATE OF ALABAMA.

Annual meeting at Birmingham, Ala. 1909.

J. N. Baker, M. D., Sec., Montgomery, Ala.

B. L. Wyman, M. D., Pres. Birmingham, Ala.

FLORIDA MEDICAL ASSOCIATION.

Annual meeting at Pensacola, Fla., April 7-9, 1909.

J. D. Fernandez, D. D., Sec., Jacksonville, Fla.

J. F. McKinstry, Jr., M. D., Pres., Gainesville, Fla.

MEDICAL ASSOCIATION OF GEORGIA.

Annual meeting at Macon, Ga., April 21, 1909.

Claude A. Smith, M. D., Sec. Atlanta, Ga.

Thos. D. Coleman, M. D., Pres., Augusta, Ga.

KENTUCKY STATE MEDICAL ASSOCIATION.

Annual meeting at Winchester, Ky., Sept. 23-25 1908.

A. T. McCormack, M. D., Sec., Bowling Green, Ky.

D. M. Griffith, M. D., Pres., Owensboro, Ky.

LOUISIANA STATE MEDICAL SOCIETY.

Annual meeting at New Orleans, La., May, 4-6, 1909.

E. M. Hummel, M. D., Sec., 141 Elk Place, New Orleans, La.

E. Denegre Martin, M. D., Pres., New Orleans, La.

MISSISSIPPI STATE MEDICAL ASSOCIATION.

Annual meeting at Jackson, Miss., April 13, 1909,

E. F. Howard, M. D., Sec., Vicksburg, Miss.

J. W. Gray, M. D., Pres., Clarksdale, Miss.

MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA.

Annual meeting at Asheville, N. C., June 15 and 18, 1909.

D. A. Stanton, M. D., Sec., High Point, N. C.

J. F. Highsmith, M. D., Pres., Fayetteville, N. C.

NEW MEXICO MEDICAL SOCIETY.

Dr. G. K. Angle, Silver City, N. H. Pres. Dr. G. S. McLandress, Albuquerque, N. M. Secretary.

Dr. C. G. Duncan, Socorro, N. M. Treas. Next meeting at Roswell, N. M., in the fall of 1909, the date to be announce later.

SOUTH CAROLINA MEDICAL ASSOCIATION.

Annual meeting at Summerville, S. C., April 21, 1909.

Walter Cheyne, M. D., Sec., Sumter, S. C.

S. C. Baker, M. D., Pres. Sumter, S. C.

TENNESSEE STATE MEDICAL ASSOCIATION.

Annual meeting at Nashville, Tenn., 1909.

Geo. H. Price, M. D., Sec., 146 8th. Ave., N., Nashville, Tenn.

B. D. Bosworth, M. D., Pres., Knoxville, Tenn.

MEDICAL SOCIETY OF VIRGINIA.

Annual meeting at Roanoke, Va., fall of 1909.

Landon B. Edwards, M. D., Sec., Richmond, Va.

Stuart McGuire, M. D., Pres., Richmond, Va.

should always be on the alert for bladder symptoms, resulting in a painful, distended abdomen, with dullness over the bladder region. Catheterization is demanded, and the complication is not of grave import provided it be relieved at once, before back pressure on the kidneys or rupture of the bladder has taken place. The cause of the retention should be treated at the same time.

Hernia of the Ovary in Infants.—Nicolle in *The Edinburgh Medical Journal*, says that in a few cases the development of strangulation gives the first indication of the hernia. In other cases the parents give a history of apparent local discomfort on the part of the infant as leading to the discovery of the swelling. In the large majority of instances, as in the case of inguinal hernia in male infants, the parents simply state that they have observed a "lump" or "swelling" in the groin, which "lump" is said to be constant or intermittent in appearance as the ovary happens to be reducible or not. In a number of the cases the infant presents an ill nourished and puny appearance, and is said to be fractious and troublesome. Treatment should in nearly all cases be operative. In the strangulated case operation is imperative. In the case of the irreducible ovary it is in every sense advisable. The wearing of a protective truss in the infant is impracticable. In the case of the reducible ovary operation would appear to be the rational line of treatment. Truss wearing by the young infant is a troublesome and usually ineffective procedure, and the choice of treatment lies between operation and ignoring the hernia. The latter line has this to be said for it, that in certain cases the hernia disappears without having been strangulated, and is not succeeded by enterocele or epiplocele. On the other hand, the operation has a mortality rate purely nominal. The advantages of operative treatment are as follows: (a) Prevention of strangulation; (b) prevention of subsequent enterocele; (c) relief from the irksomeness of truss wearing; (d) improvement of the infant's health (in many cases the change from peevish emaciation to plump health is marked); (e) ablation of cysts in the ovary. In over thirty per cent. of the cases the ovary is found to contain cysts—single or multiple. Such cysts are ablated in various ways—excision followed by suture, evisceration with the sharp spoon, or other method.

Chorea.—Rankin, in *The British Medical Journal*, says that in true chorea the muscular movements are involuntary, purposeless, and liable to intensification under the influence of mental perturbation or emo-

tional excitement. They cease during sleep. The peculiar and intimate association which exists between chorea, cardiac disease, and rheumatic fever, is well recognized, but its nature has not been ascertained. Chorea rarely occurs under five years of age; about fifty per cent. of all cases are met with between five and ten years. It attacks girls three times more frequently than boys, and this percentage increases after the second decade. It is most prevalent during cold and damp weather. Certain families are specially predisposed. Recurrences are prone to occur. The proximate cause is probably a micro-organism similar to that of rheumatism, the toxins of which are responsible for the nervous phenomena. But the direct excitant of an attack is often some form of emotional disturbance. The onset is usually gradual. Restlessness and clumsiness of movement are followed by erratic contractions of single muscles or groups of muscles. The disorderly character of the muscular contractions is aptly described as a *folie musculaire*. The parts selected by chorea are those which habitually combine in purposeful and emotional movements. Articulation is more or less impaired, and may be so jerky and explosive as to make the speech unintelligible. Rigidities do not occur, but there is invariably some loss of muscular power. There is a mental element attaching to all cases of chorea, and in extreme cases occurring in adults this intellectual impairment may gravitate into actual mania, and produce that rare and frequently fatal variety of the disease known as chorea insanienis. There are no marked sensory disturbances in chorea, but aching pains in the back may be complained of. The reflexes are usually normal. Endocarditis and pericarditis are in evidence in the majority of the cases. Almost invariably the action of the heart is abnormally rapid. The disease usually runs a chronic course and lasts, on an average, for from eight to twelve weeks, but remissions and exacerbations may prolong it over six months. The most frequent complications of the disease are those which occur in association with rheumatism. Erythema nodosum and peliosis rheumatica are the most common skin complications. A temporary form of imbecility is not uncommon in several cases. Pulmonary tuberculosis supervenes upon chorea in a fair number of cases. No constant lesions are found in the nervous system which can be regarded as the anatomical basis of the disease. The prognosis in children is favorable as regards recovery from the choreic attack, but there is always the risk of permanent cardiac mischief. In the treatment of the disease, rest, both mental and phys-

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ical, is of special importance, and is indicated in every case, no matter how mild. The child ought to be put to bed and kept there until all movements cease, so as to minimize the risk of cardiac complications and at the same time expedite the natural tendency to recovery. There is no specific for the disease, but arsenic gives the best results of any drug. Given with butter it is less toxic than when given in solution. In severe cases something must be done to control the muscular movements. Here chloral hydrate acts best, but in desperate cases it may be necessary to give morphine. When the movements are not too violent, warm baths or hot packs may be used with benefit.

Sanitation in Africa.

It is claimed that for a West African town, Bathurst, the capital of Gambia, may be said to be very presentable. The streets are wide and clean, and mosquito and sanitary regulations are properly enforced, while a new departure has been made in putting representatives of the Mandingos and Jollofs on the Board of Health, apparently with satisfactory results. There were several outbreaks of smallpox in the colony during the last year; over 4,700 persons were vaccinated, and the natives, who at first refused to allow their children to be vaccinated, soon recognized its utility and sought to have it done. An attempt is being made to get a rough idea of the vital statistics of the people, and the chiefs were given red and blue books and instructed to mark in them all births and deaths in their district. Although these statistics are probably not too accurate, they will doubtless improve. The Bathurst death rate is only 31.6 per mille; but the climate is very trying during the rainy season from July to October, and in the dry season the thermometer may range from 56 F. in the early morning to 100 at midday.—British Medical Journal.

Use of Potassium Iodide in Thickening of Arterial Walls.

Dr. J. H. Spitzly reports a case of arterial thickening in a male patient aged sixty-five. The patient complained of insomnia, muscular weakness and pain in the precordial region on the slightest exertion. After examining the patient he found the heart, lungs and urine normal, but further examination revealed thickening of the arterial walls which was plainly felt in the temporal and radial arteries. The patient was then put under the following treatment: Four grains of a mixture of iodide and bromide of potassium three times daily, followed by hot foot baths before retiring.

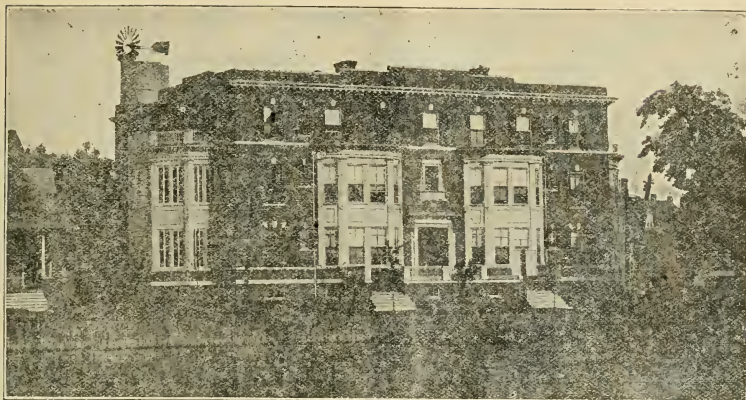
Under this treatment the patient began to improve and in a short time all his symptoms abandoned him and he was cured.—British Medical Journal.

Indications for Radiotherapeutics.

Th. Nogier gives a careful resume of those cases that may be expected to be relieved or cured by the use of the X-rays, and the technique of their use. Among the skin diseases cured are hypertrichosis, trichophytosis, favus, acne, prurigenous dermatoses, eczema when local, and lupus vulgaris. Of neoformations keloids are cured. Sarcomata should be first operated on and then rayed to prevent recurrences. Lymphadeny and leucemia are benefited. Cutaneous epithelioma is cured. Deeper cancers may be first operated on and then rayed. Even internal cancers are benefited in relief of pain and inflammatory symptoms. Adenitis of tubercular nature is cured. Neuralgias are relieved. Hemorrhagic fibromata are cured by the production of the premature menopause. Dangers are radiodermatitis, sterilization of ovaries and testicles, and eczematous eruptions in the distribution of a nerve that has been too strongly irradiated.—Lyons Medical.

Phosphates in Urine.

It is frequently desirable to determine the amount of phosphoric acid contained in a sample of urine. Since the customary titration with uranium solution is too difficult for the ordinary practitioner, Dr. Friedmann has devised a simple tube, which is filled up to the mark U with urine, and to the mark R with the usual magnesia mixture. After thorough shaking, the tube is set aside, and after 24 hours the height of the sediment will indicate the amount of phosphoric acid in the liter. The author found that the normal amount excreted within 24 hours with ordinary diet varies between 1.5 to 3.6 gms. Phosphaturia may be true or false; in the latter case the diminished acidity of the urine may cause a heavy precipitation, though the actual amount of phosphates present need not be above the normal. A precipitation of phosphates may, however, also be seen with a perfectly normal acid reaction of the urine, especially in sexual neurasthenia. The phosphaturia occurring with vomiting of pregnancy and throughout pregnancy is also as a rule spurious. In fevers there is an increased excretion, but this is due to the increased concentration of the urine. True phosphaturia occurs with diabetes mellitus and insipidus; certain bone affections, and in tuberculosis; also in chlorosis, oxaluria and uric acid diathesis. A diminution of the



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phosphates has been reported in pregnancy, pernicious anemia, leucemia, acute yellow atrophy of the liver, cirrhosis of the liver, multiple periostitis, arthritis, rachitis and renal disease.—Muench. Med. Woch.

Researches on the Hemolytic Power of Placental Extract.

G. Ballerini has made experiments on the hemolytic power of placental extract as compared with extracts of other tissues. The existence of this power is undoubted in placental extract, manifested not directly but after passage through animals. This power does not appear to differ from such power as found in the other tissues so as to be of any practical value.—Annali di Obstetricia e Ginecologia.

Mechanism of the Action of Bier's Hyperemia.

R. Tarantini has experimented on animals to ascertain the manner in which Bier's method produces its effects. He gives us his conclusions as follows: The lymphatics, in the neighborhood of the part treated are affected; showing pigmentation when a colored fluid is injected, while immediately under the bell the lymphatics show no pigmentation. The hyperemia of stasis prevents the entrance into the circulation of foreign bodies injected under the skin. The effects last one half hour after the application. Immediately after the application the hyperemia prevents entrance of substances into the circulation by the action of a mechanical obstacle, later phagocytic action and new formation of connective tissue continue this effect. Hyperemia confers its benefits by exalting the natural means of defense of the organism.—Il Policlinico.

Iodipin in Tablets.

Iodipin is a very valuable drug which can frequently be given where the iodides disagree. The only objection is the oily taste, which is apt to be disagreeable where the drug must be given for a long time, as in chronic bronchitis, asthma, and arteriosclerosis. A. Weismann states that for such cases the iodipin tablets recently placed on the market are especially indicated. They are yellow, sugar-coated, and contain each 0.5 Gm. (8 grn.) of an especially prepared solid iodipin, which corresponds to 0.05 Gm. ($\frac{3}{4}$ grn.) of iodine, or 0.065 Gm. (1 grn.) potassium iodide. The dose is from 2 to 4 tablets three times a day. They may be given at any time, irrespective of the condition of the stomach.—Wien. klin. Rundsch.

Euquinine in the Treatment of Malaria.

Malcolm Watson, of Glasgow, reports

that the previous terrible infant and child mortality in the Malay States has been entirely stopped by the employment of euquinine, which he administers to his charges in doses of 5 grn. per diem (in a little sweetened condensed milk). Instead of the splutter and struggle experienced with the ordinary quinine salts, he finds the children almost without any exception punctually appearing, each with his tin, at the time of the daily dose. The author states that 12 out of 26 children died from July to Dec., 1906, while there has not been a single death during the six months of 1907.—British Med. Jour.

Post-Grippal Complications.

If there is one particular feature which characterizes the genuine influenzal attack, it is the decided and sometimes intense prostration that remains after the subsidence of the acute symptoms of the disease. This general vital "set back" is oftentimes entirely out of proportion to the severity of the original grippal attack, and the most robust patients are sometimes the most severely prostrated. In addition to the general devitalization, La Grippe is extremely likely to be accompanied with or followed by such troublesome complications as otitis, neuritis, sinus inflammation, gastro-intestinal derangements, resistant and obstinate bronchial catarrhs and, more dangerous than all, a peculiar, more or less characteristic, asthenic, form of lobular pneumonia. The skill of the physician and the vital resistance of the patient are often taxed to the utmost in a combined effort to induce final recovery. Anemia, to some degree, is almost always brought about by the combined devitalizing power of the disease and its complications, and convalescence is likely to be tardy and tedious. An easily borne, readily assimilable hematinic does much to hasten recovery and Pepto-Mangan (Gude) is an especially eligible method of introducing the much needed ferric and manganic elements, without producing or increasing digestive difficulty. In no condition does this well tried hematic remedy evidence its undoubted reconstructive power more certainly than in the treatment of post-grippal convalescence.

Acute Abscesses: A Method of Obtaining Rapid Healing.

Dr. J. Phillips states that if all the dead material in a localized abscess is removed and means taken to prevent the collection or further dead material in the abscess cavity to act as a culture medium, rapid healing will follow. He gives the following rules: 1. Cleanse the skin as in operating

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on sterile tissues. 2. Make an incision long enough to permit of the pus being freely evacuated and the pyogenic membrane rubbed clean and smooth with gauze wrapped round the finger. 3. Having emptied the abscess cavity as completely as possible, pack it tightly with gauze (we use 1 in 1000 mercury perchloride gauze, dry) and apply a wool dressing and bandage as firmly as possible. 4. At the end of 48 hours remove the packing and dress the wound as if it were a simple incision; that is, do not pack or drain at all, but simply fix a gauze and wool dressing firmly in place with a bandage. This dressing will require changing only once in three or four days until the incision is soundly healed, and it will be found that the sides of the abscess cavity unite promptly and that there is no outpouring of pus from it. From the time when the packing is removed it is practically a simple incised wound that is being treated. Histories of six illustrative cases are given.—British Medical Journal.

Fever in Children.—Cantley (London Medical Lancet) divides the cases of anomalous fever in children into two groups. The first and more numerous group includes all those in which no definite cause is found on examination, but data can be discovered for a probable diagnosis, which is more or less verified by the course of events. The second group is composed of those cases in which the most thorough investigation fails to reveal the cause of the fever. In most cases fever is due to the direct effect upon the nervous system and so on the heat regulating centres, of toxins produced in the tissues of the body, or in the food before or after ingestion, by micro-organisms or ferments. Feverish new born babies should be examined most carefully for evidences of sepsis, which may originate almost anywhere in the body. It is very improbable that teething is ever a direct cause of fever, but its complications may be so. Among them may be mentioned the bolting of food, local inflammation of the gums, inflammation of the mucous membrane of the mouth, etc. Many an anomalous temperature is due to inflammation of the throat. In acute follicular amygdalitis, or even in diphtheria, there may be no symptoms referable to the throat. The nasopharynx is a common site of infection. Chronically enlarged and pitted tonsils are a potent source of attacks of fever. In the absence of all other evidence one may have to fall back on the alimentary tract as the possible source of the fever. Carbohydrate fever is a name sometimes given to febrile attacks which are apparently the result of

an excess of carbohydrate food and cured by strict limitation of the diet. The fever lasts from one to four days, and may reach 104 deg. F. In some cases there are incessant vomiting and constipation. Any of the infectious fevers in their early stages may give rise to fever of uncertain origin. True influenza is often unrecognized and still more often diagnosed on insufficient grounds. The abdominal type of influenza is often mistaken for appendicitis. The rheumatic poison may cause fever in children in many ways, myocarditis being a cause that is often overlooked. Pyelitis is a cause of fever that is very difficult of diagnosis. Female infants are especially liable to infection of the urinary tract by the *Bacillus coli*. In the bladder it gives rise to little or no fever, bacilluria, and sometimes mild cystitis. It is when the bacillus infects the pelvis of the kidney, causing pyelitis, that it gives rise to high fever, the cause of which is overlooked, as it is difficult to obtain the urine of female babies for examination. Nervous, excitable children are prone to irregular pyrexia on slight provocation. Undue exertion, chill, and insufficient clothing are sometimes to blame.

Eczema a Neuropathia.—Kesteren in the British Medical Journal says that eczema is a pure neuropathia, and to regard it solely as a local affection is a grave misconception calculated to lead to serious error in treatment. But certain pathological states are frequently the indirect factors in the causation of eczematous attacks. The very nature of eczema—an exudative dermatitis due to capillary engorgement—indicates clearly vasomotor disturbance due to some morbid influence on the sympathetic centres of the nervous system. Eczema is a common concurrent of many functional and nervous derangements. It is so often associated with gout, that "gouty eczema" has been formulated as a specific type. Uterine disorders and pregnancy, together with mental cases—especially imbecility—are often complicated by eczema. Even where local irritation is the exciting cause of the attack, it still remains a neurosis. External toxic applications, friction, heat, cold, and the turgescence of varicosity are only the irritants of the peripheral filaments of the sensory nerves which set the eczema going. Eczema may thus be divided into two classes for purposes of treatment: (1) That from within, acting through the sympathetic chain of the functional system, may be denoted the ganglionic or idiopathic form, and (2) that arising from external or local irritation, the peripheral or traumatic. If a storm of gout has upset the sympathetic

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Medical Society of the State of North Carolina meets in Asheville, June 15-18, 1909.

The Tri-State Medical Association of the Carolinas and Virginia (only members of State Societies eligible). Next Annual Meeting: Charleston, S. C. Date of meeting February 16, 1909. President, Dr. Albert Anderson, Raleigh, N. C.; Secretary-Treasurer, Dr. J. Howell Way, Waynesville, N. C.

nerves and eczema has resulted, then the usual treatment for gout must be adopted, plus a direct nerve sedative. Acetanilid and potassium iodide act well, but colchicum should be avoided, as it dilates the capillaries. In eczema of an asthenic type, from anæmia, the indication is iron with nerve tonics such as strychnine. If alcohol is the irritant, abstinence, with the bromides and atropine will bring alleviation. Dyspepsia, so frequently the exciting cause, calls for careful dieting, attention to the bowels, and such a nerve sedative as the bromides, to arrest the gastric nerve irritation. Eczema that accompanies uterine trouble disappears, as a rule, with its removal.

Treatment of Sweating Feet by Formol.

—Viela (Archives de Medecine et de Pharmacie Militaires) believes in the efficacy of formol as a treatment of sweating feet.

Referring to the article of Vaillard, the author says that the conclusions were so generally accepted that the treatment has become extremely common in the army.

The author advises that each year on the approach of warm weather all the soldiers affected with sweating feet shall be subjected to the following treatment: On the first day in the morning, at noon, and in the evening the ordinary commercial solution of formol, one-third strength, is painted over the soles of the feet. On the second day three applications are again made, but with a solution of half strength. On the third day three more applications are made with a solution of full strength. Thereafter every eight days a solution of full strength is applied. In many subjects cure is maintained by an application repeated not more frequently than once in fifteen or twenty days. When the epidermis is greatly macerated the beginning treatment may be begun with 1:10, 1:20, or even 1:30, according to the degree of sensibility. If the application causes very violent burning, washing with water and a weaker strength of solution are employed. Sweating hands are cured by a similar treatment, which has the effect of slightly blunting tactile sensibility.

The Treatment of Disease and Deformity Due to Scar Tissue.—Snowman, in the London Medical Lancet, says fibrolysin, a combination of sodium salicylate with thio-sinamine, is a drug possessing great value in occasioning the absorption of scar tissue. The injections are administered deeply into the gluteal muscles, occasioning little or no pain. It is especially commended in the treatment of keloid, Dupuytren's contracture, and indurations and adhesions in general. Successful results have been re-

ported from the use of this drug in both intestinal and gastric adhesions. He says that the most interesting of the remote applications of the drug is its use in middle-ear disease. At the General Hospital in Vienna the doses are given in the arm of 0.3 cubic centimeter, gradually increasing to the contents of one ampulla—i.e., 2.3 Cc. The treatment usually comprises from 20 to 30 injections spread over a period of about two months. If no benefit is derived from the first eight or ten injections the treatment is abandoned. Their experience seemed to show that patients with pronounced deafness may benefit to the extent of greatly improved hearing for speech and noise, but recovery to the degree of appreciating the ticking of a watch is not to be anticipated.

Tinnitus also was improved. The immediate effect of the drug seems to be the production of a serous congestion and hyperemia. He says that no more apprehension need be felt by the practitioner who has decided to treat a suitable case than he would feel in the injection of diphtheria antitoxin.

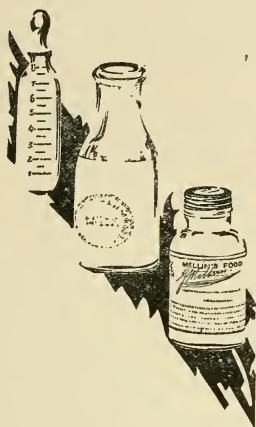
Rumination in a Girl aged three Years.

—Comby (Archives de Medecine des Enfants) mentions the case of a child, whose parents were neurotic but did not suffer from merycism, was born at full time, and enjoyed good health until the age of one year, when she contracted whooping-cough complicated with gastro-enteritis. Later she suffered from constipation alternating with attacks of muco-membranous colitis. It was only about three months prior to her coming under observation that she was first noticed to bring back her food into the mouth. This occurred invariably a few minutes after finishing a meal, and was unaccompanied by any effort or pain. The food, after further mastication, was swallowed again, and, in the case of desert and dainties, with evident pleasure. She was encouraged by her mother to spit the food out, but this she refused to do. This rumination would last for about two hours, during which time there was emitted from her mouth a disagreeable sour odor. The child was constantly in a state of hunger. Her general health was, however, good.

The Treatment of Cervical Spondylitis.

—Lehr (Archiv für klinische Chirurgie) describes an extension bandage in use in Schanz's clinic for the treatment of cervical spondylitis. It is recommended on account of its simplicity and because it permits the patient to go about. It was devised originally by Schanz for the treatment of congenital wryneck, but has since proven the most important means of treating cervical Pott's disease.

The material used is cotton wadding.



¶ Nitrogeaneous material is one of the most important elements in baby's diet.

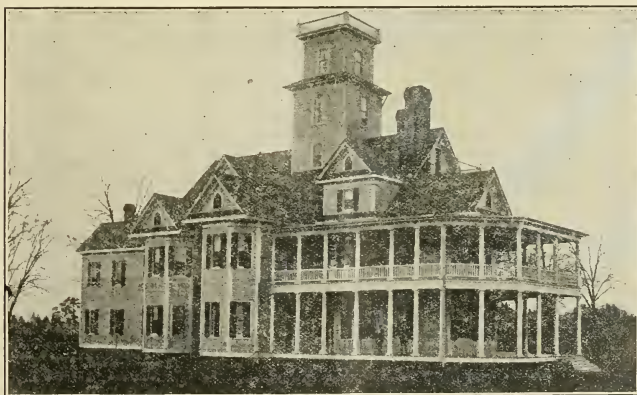
¶ Mellin's Food prepared with fresh milk, is rich in nitrogeaneous material.

Literature and Samples upon request.

Mellin's Food Company,
Boston, Mass.

ST. LUKE'S HOSPITAL.

DR. J. H. MARSH'S PRIVATE SANATORIUM.
FAYETTEVILLE, N. C.



Saint Luke's Hospital is conducted by Dr. J. H. Marsh as a Private Sanatorium for the exclusive use of his patients, and is provided with an able staff of thoroughly qualified assistants.

The building was erected in 1904, and thoroughly equipped with the latest scientific appliances for the treatment of all classes of Medical, Surgical, Gynecological, Eye, Ear, Nose and throat disease; and is located on Haymount in the most beautiful resident part of the city. Contagious diseases are not admitted.

The nurses are provided from the Saint Luke's Hospital Training School for Nurses.

The terms are moderate varying from \$12.50 to \$20.00 per week for board and general nursing according to the room occupied, For Booklet and further information Address. J. H. MARSH, M. D.

The patient lies upon an operating table, and the head is slightly bent backward by an assistant. Then several layers of wadding are placed around the neck and this held fast with a muslin bandage. Slight cyanosis of the face shows that the bandage is tight enough. After the patient gets accustomed to the bandage and ceases to struggle against it, and the wadding becomes compressed, the cyanosis disappears. The bandage presses against the head and the shoulders, and on account of its elasticity makes extension upon the neck. It also brings about fixation. When the bandage becomes loose by compression of the wadding it is made tight again by putting more bandage over it. If it becomes separated from the head or shoulders, it can be tightened here by introducing more wadding and holding it in place by more bandage. As a rule it will go one-half to one week without attention.

The bandage needs to be changed in entirety only at rare intervals. So long as pain is present the patient is kept in bed, but as soon as the pain has disappeared he is allowed to walk about.

Liquor Hydrargyri Perchloridi (B. P.) in the Treatment of Diarrhea.—Faichnie, in the *Journal of the Royal Army Medical Corps*, says that one of the most universal diseases on service is undoubtedly diarrhea, and any drug that will cure this complaint quickly is worth bringing to notice, as, apart from the discomfort, the fact that the bowels are opened several times a day at inconvenient times and places, and possibly during the night-time, instead of once a day at a selected time, with sanitary conveniences available, must be of great weight from a sanitary point of view.

Many years ago, on first going to India, he was recommended to use liquor hydrargyri perchloridi for an intractable case of diarrhea, and he found it most useful. During the South African war, when diarrhea was a very common complaint he found it an exceedingly valuable medicine. It was so often successful where other drugs failed that there can be no doubt of its therapeutic value.

Liquor hydrargyri perchloridi is described as an intestinal disinfectant, and combined with chlorodyne seems to remove the cause as well as the symptoms of diarrhea. Its use is well known, and his reason for bringing it forward now is that when in charge of two sections of a British field hospital during the late Mohmand expedition he was unable to administer it for a time, when diarrhea was prevalent, as it is not provided in the panniers. As a substitute, however, he used the following, which acted equally well, viz., one tablet of the per-

chloride of mercury supplied as an antiseptic, containing 8.75 grains of hydrargyri perchloridum, dissolved in $17\frac{1}{2}$ ounces of water, which gave a mixture containing 1-18 grain in one fluidrachm, the same strength as the B. P. preparation. The blue color of the tablet, due to an aniline dye, is quite harmless.

Mesenteric Rupture from Abdominal Contusion.—Reinecke (*Munchener medicinische Wochenschrift*) says this condition is frequent, whilst transverse mesenteric tears resulting in the detachment of the bowel are rare. He reports the case of a 41-year-old man, who as the result of a severe abdominal contusion suffered immediate and agonizing pain and profound shock. He exhibited a swollen, rigid, tender belly, together with fracture of the pelvis. The abdomen on operation was found filled with blood, about one liter being evacuated. The ileum for a distance of about 22 centimeters, beginning at a distance of 3 or 4 inches from its ileocolic junction, was torn free from its mesenteric attachment. There was a further rip in the mesentery running upward and extending for about 12 centimeters. The intestine, though not open, exhibited all the signs of impaired circulation. Fifty-four centimeters was resected. The cecal end was invaginated, and the upper end implanted into the ascending colon. During the operation camphor injections and intravenous salines were given. With the exception of an attack of pneumonia the patient recovered without incident.

The Mortality in Switzerland from Septic Puerperal Processes.

From a series of statistics compiled by Perrin, he finds that 0.35% of all puerperae die from puerperal fever, and of all fatal cases in the puerperal period 55% are ascribable to this cause. Of deaths following abortion two-thirds occur from septic processes. The circumstances surrounding illegitimate births have not the importance usually accorded them. Defective hygienic and sanitary conditions do not appear particularly to favor puerperal fever. They certainly are not here as important as in other infective diseases, particularly tuberculosis. 13% of the fatal cases were treated in the hospital, but only 0.27% were taken sick in the hospital. In general, it may be stated that even yet infection is the real determining factor in the mortality percentage in puerperal women. Every fourth fatal case of puerperal fever can be traced to midwives. Ten times in a hundred cases gonorrhœa was present and 20 times criminal abortion was the cause.—*Abstr. from Zentralbl. f. Gyn.*

The Charlotte Medical Journal.

VOL. LIX

CHARLOTTE, N. C., FEBRUARY, 1909.

No.2

Fourth Annual Meeting of the North Carolina Association for the Prevention of Tuberculosis, Held at Charlotte, N. C., Jan. 12th-13th, 1909.

Selwyn Hotel—Proceedings

The Association was called to order by Dr. Register, Chairman of the Local Committee of Arrangements, who said:

Ladies and Gentlemen:

It gives me great pleasure to call together the Fourth Annual Meeting of the North Carolina Medical Association for the Prevention of Tuberculosis.

Dr. McGeachy, of the Second Presbyterian Church, will lead us in prayer.

Rev. A. A. McGeachy, pastor of Second Presbyterian Church, led in prayer.

O, Thou Great Physician, Thou hast taught us in all our ways to acknowledge Thee, with the promise that Thou wilt direct our path. Therefore, we come to Thee, at the beginning of these discussions, which are to be conducted in the interest of those who are made in Thy image, to seek Thy favor, which is light, and Thy counsel, which is understanding. We plead before Thee the cause of that vast multitude of those that suffer from a disease that is not mentioned in Thy work, nevertheless, we come with confidence, because Thou healeth all our diseases and crowneth us with loving kindness and tender mercies. We remember that while on earth, Thou healed all that were brought to Thee, of whatever disease they were afflicted: we pray Thee, therefore, O God, that Thou would give to these, Thy servants, who have come with the skill of science, the inspiration of Thy Spirit, by which we always achieve the greatest and most helpful results, and we pray Thee to give all our people a spirit which will make them heed all that is said, to the end that this scourge may be relieved, and then, O God, with sound bodies and minds, we will be a healthful people, and hereafter, in that Land of Life and Glory, in that Land of Peace and Health and Plenty, in that Land where no noxious odors arise, in that Land that is radiant with Light, in that Land where we shall never say we are sick, we give Thee all the praise, O God, Most High, Most Blessed, forevermore. Amen.

Address of Welcome in behalf of the city of Charlotte, by Mayor T. S. Franklin.

Mr. Chairman and Gentlemen:

When I came here, I had prepared a speech about half a minute long, but when I entered the hotel Dr. Register said that

Dr. Munroe, as usual, was late, so I re-arranged that speech in order to consume a part of Dr. Munroe's time. I now find that Dr. Munroe is here, so I shall have to again re-arrange my speech.

It is a great pleasure to welcome you to the city of Charlotte, and in doing so, I wish to say, we are glad you are here, not only on account of your own personal worth, and the question of your membership in this Association, but especially on account of the important subject which you have under consideration. Charlotte, during the past year, has been honored by, and has had the pleasure and privilege of entertaining, a large number of conventions, and yet, I do not hesitate to say that in my opinion this convention is superior to, and more important than all of them. You come to us, not for the purpose of considering business and business methods, but you have come in the interest of mankind. The greatest work of any man in this age is the alleviation of suffering. The greatest scourge of our people today is tuberculosis. The brightest minds of today have been, and are, considering the question of how it can be prevented. You have a very momentous subject before you, and I am sure that you will give this subject due consideration, and that our people will be greatly benefited by your deliberations.

I extend to you a hearty welcome to the city of Charlotte.

DR. MUNROE'S ADDRESS.

Mr. President and Gentlemen:

As a representative of the Medical Profession of Mecklenburg County, and the City of Charlotte, it gives me great pleasure to extend to you a most cordial welcome into our midst.

We are honored by your coming, our doors are opened wide for your entrance, we sympathize with your aims, we would take part of your burden, join you in your work, and hope to share in the reward.

This movement may be designated a campaign of agitation and education, promoted and engineered by men thoroughly competent to arouse indifferent sleepers, and enlighten the anxious and ignorant, upon a subject of transcendent importance to every member of our commonwealth. It might, also be called a crusade of philanthropists, who, impressed by the mounds of new made graves, and moved by the tears of the sick and dying, are now marching to a war of extermination. Upon the banners of the army I see three inscriptions. 1. "Tuber.

culosis, our greatest enemy;" 2. "Tuberculosis can be prevented;" 3. "Tuberculosis must be exterminated." Over this marching army I see also, a shining star, sending its bright rays to all around, the star of hope for those already afflicted with the dread disease, and in its effulgent light, I read the blessed words, and truthful, for those who apply early, "Tuberculosis can be cured."

I was interested recently in three statements found in two prominent publications. One an editorial in the best morning daily published in the South, and the other in the columns of the most thoughtful weekly magazine, with which I am familiar. The editorial referred to, paid the medical profession the high compliment of commending its members, as those who constantly advocated and advised measures calculated to prevent diseases, which measures, if adopted, would tend to do away with the need for the services of a physician, thereby diminishing his income, and ultimately make his professional work a financial failure.

The second statement, found in the periodical referred to, was that a careful survey revealed the fact that, while in recent years the prices of all commodities had advanced, the wages of the ordinary laborers and artisans raised, and the incomes of salaried men increased, the average income of physicians had actually suffered a decrease.

The third statement, found in the same periodical, was a coupling of the two previous ones together, the one as an explanation of the other. That is, that statistics prove the decreased average of the physicians income; that he uses his knowledge and influence to prevent disease, is known and read of all men, and his efforts in this direction have been eminently successful in recent years.

It follows as the day, the night, that there is less sickness, and consequently less work for the physician to do.

I do not stop to comment on the unselfish spirit, and unvarying attitude thus assumed by our profession, but would only remark, that this convention, composed chiefly of physicians, is an exemplification of this attitude a magnificent object lesson along this line, and a notable proclamation of the truth, that the primary motives impelling the physician to action, are the welfare of his patients, and the good of humanity.

In the ordinary convention of medical men an analysis will show two dominant and perfectly proper motives. One is legitimate self advertisement, the other is mutual improvement and the desire for information, and personal education. I take it that the first of these has no place in this

convention, and the second even is of minor importance as compared with your present work of stirring up the profession to greater activity, and enlightening the general public, and thereby enlisting their hearty cooperation in the measures best adapted to the eradication of this disease.

Our relation to the public is a delicate one, and I am inclined to think that the vigorous promulgation of the dangers of infection have, in some instances driven the public too far, and have made them unnecessarily harsh and inconsiderate in their bearing towards the tuberculosis patient. I am glad to note a paper scheduled for this convention bearing on this phase of the question. In the interest of humanity in general, and especially in behalf of the unfortunate ones who are already diseased, I hope you will give due consideration to the point here suggested.

When we consider the fact that there is a stage in the disease, so far advanced, that no hope of recovery can be offered; and the additional fact that if taken early and treated intelligently, most cases get well; we wonder why so many cases pass the boundary line of a possible recovery, and hopeful treatment, before any active measures are taken. In nearly every village you will find one or more such cases, nor will you have to travel very far in the country to encounter them; while in our cities, they are counted by the score and hundreds; several thousand in our own beloved State.

This vast multitude, many of them our best and brightest people, sometimes it is said, "the flower of the family," marches steadily, persistently on to an untimely grave, most of them bright, strangely cheerful, and apparently happy, but generally conscious of the hopeless struggle, and expecting a fatal issue.

In the light of modern science these things ought not so to be. To prevent the inception of the malady, is of course, the matter of greatest importance, and in your deliberation, I know you will consider all phases of this question. I trust also that you will give proper consideration to those already diseased, and remind them that there is a "Balm in Gilead," that there is hope for the consumptive in every case, if treatment is begun early.

Why is treatment not always begun early? This is an important, and very vital question; and I trust it will receive full consideration.

Asking permission to make one or two suggestions in this convention: (1). I freely admit that, in some instances, the responsibility rests entirely upon the family physician. He is consulted by the anxious patient, and perhaps a more anxious

family. They are seeking relief from their fears, and asking for a comfortable assurance that all is well. The good, sympathetic doctor, makes a rather superficial examination, and if he finds recurring chills, he calls it malaria, or persistent cough with a few rales, he says bronchitis. He may have some doubts about the full accuracy of his diagnosis, but his kind heart prompts him to stop short of a thorough examination, and give the comforting statement—"bronchitis," "malaria," "indigestion," etc. "I have not found any tuberculosis"—when, as a matter of fact, he has not looked for it.

I would not harshly criticize this kind-hearted doctor, for certainly his motives are of the best, and perhaps he may not have the facilities for pushing his diagnosis to a more accurate conclusion.

(2). But after all this is said and admitted, the fact remains that the large majority of cases the responsibility for delay lies at the door of the patient or his friends. It is not intentional negligence, but rather ignorance of the significance of the symptoms which are regarded as too trivial, and of too little consequence, to justify a doctor's bill.

After trying varying domestic remedies, the sufferer applies to his accommodating druggist for a good cough remedy. He advises, and perhaps donates Dr. ———'s cure for consumption. The name of the drug, although conveying a repulsive suggestion, is still strangely attractive. Moreover, it is apt to have enough opiate to produce a soothing effect, and the druggist has no trouble in selling several large sized bottles. Later on, as the cough becomes more troublesome, and probably upon the advice of a friend, he tries Cod Liver Oil. After experimenting with various emulsions, tasteless preparations, etc., he finally does what he should have done in the beginning, puts himself under the regular treatment of a competent physician; after it is too late, alas for any curative measures to be adopted.

It sometimes happens that a patient is suffering with one or more of the slight ailments that characterize the insidious approach of tuberculosis, and comes to a physician for examination. The mere mention of tuberculosis, is sufficient to frighten him off. So great is his dread of this disease, his only impulse is to fly somewhere, anywhere to get rid of the disease, and the doctor who even suggests it. The consequence is, he goes from one doctor to another, hoping to find one who will give him a less serious diagnosis, but submitting to no regular treatment, at the hands of any one. Such an one demands our tender-

est sympathy, and most thoughtful consideration.

To give proper enlightenment to such a one, to save others from a similar dread fate, and finally to exterminate this scourge from our fair land: These are the worthy objects which have brought you together. In this laudable undertaking, you deserve every possible aid and encouragement, and I bespeak for you the hearty cooperation of the people of this city and community, and indeed of all good citizens of our entire State.

Response to Address of Welcome, by Dr. Chas. L. Minor, of Asheville, N. C.

Ladies and Gentlemen:

It seems to be most proper that the first meeting of this—what I believe to be a great Association, should have taken place in Charlotte, wherein all of us recognize the enterprise, energy and public spirit of your city, and let us trust that enterprise and energy are going to characterize in the future all the actions of this Association.

In the South we have much tuberculosis, and in point of view of this Association, it is the tuberculosis in the lower classes that we want to consider and to fight. We doctors realize how much tuberculosis is hidden away in the cabins found throughout the South. We know how it is spreading,—not so much among the rich, as among the poor whites, and it seems to me that any organization, which has for its purpose the helping of the poor classes,—the negroes and poor whites, should receive the assistance, not only of the doctors, but of the whole State. We do not realize how many men are kept from work, how many men who might be useful citizens are made useless and finally taken away by this disease. If we could only save a small fraction of those taken away every year by this disease, think what it would be for the benefit of the State. Medically, this Society will benefit the profession, the doctors, by stimulating study of this disease; it will teach him not to look upon a case in the way Dr. Munroe so well described a short while ago. It will also benefit the layman; it will increase his efforts; it will show what he owes to this fight, as well as to the doctors. I wish you all to realize that this is not a doctor's association, but is for the citizens of North Carolina. If only the doctors take an interest in this association it is dead. We must draw the laymen in. It is one of our chief efforts to draw the laymen in. Let us not think that we can be successful without their labor also.

We should have laymen taking an active interest in everything we do, and then, and only then, can we accomplish what we want to do. If we begin here (and we want to

begin at home) by getting the interest of the people of this city and of the Mayor, if they have the same interest in this that they have in public things, in building roads, etc., that is what we want. Not only do we want them to do it for philanthropic reasons, but let them also realize what it will mean for the State. It will mean less time lost from their mills; it will mean less ill health for all classes of people. It means good health for our own dear loved ones at home, as well.

If we can enlist, first, in Charlotte, and then all over this State, the enterprising citizens of which Charlotte is justly so proud, then we must take the stand we want to take. We do not want to be behind any other State in this great enterprise. Now wars are a thing of the past; the South was so long hampered,—so long unable to help herself. She has not realized what she can do. We want to wake her up to a realization of what she can do. We do not want the people to cure tuberculosis; that is the doctor's business; we want them to prevent it before it arises. If we all work together to accomplish that end, then, gentlemen, I see a glorious future before us.

President W. L. Dunn, of Asheville, then delivered his address.

Reading of minutes by Dr. C. A. Julian, Secretary.

Minutes are approved.

Report of Dr. Julian, Secretary, as follows:

Gentlemen:

I have a very brief report to make. During the year I have sent out about 4000 letters. In June, 1908, the Secretary turned over to me his books. There were about thirty members at that time enrolled. I have added to the membership of this Association 78 names, and have collected \$78.00. The old Treasurer handed to me, at the expiration of his term, \$25.00, making a total of \$103.00. I have spent during the year for postage, letters, etc., \$109.53, leaving a balance of \$6.53 due Treasurer.

By Dr. Taylor, of Morganton, N. C.: I make a motion that visitors to the Association be invited to register with the Secretary and take part in our deliberations.

By Dr. Minor, of Asheville, N. C.: I second that motion.

By Dr. Taylor, of Morganton, N. C.: I would like to have all who are eligible made members.

By Dr. Minor: It seems to me most important that we should. I know at the National Convention, which I attended, we added a great many new members by doing that very thing,—by showing the laymen their duty in joining this Society.

By Dr. Taylor, Morganton: I intended

to say that I made motion that we invite all who are eligible to join.

By Dr. Dunn, President: I trust that all those who are present will understand that the doors of this Association, as Dr. Minor pointed out in his response, are open wide to the laymen. If anything, the doors are open wider to the laymen than to the medical men. It is an Association made up of laymen and medical men, and we would like to have every one, whether eligible or not, in this Association.

By Dr. Julian, Secretary: I gave it out to the press that this was a philanthropic Association, and I think it will be ethical to have any articles or papers that may be read here, published in the daily papers of the city.

By Mr. Minor: I move that we turn over to the press for publication, any papers that are desirable that may be passed upon by the President and Secretary.

Motion is passed.

By Dr. Taylor, of Morganton: I am afraid it is not understood who are eligible and who are not eligible to join this Association. The point is that everybody in North Carolina is eligible to join this Society, and they can register and give us a dollar or two if they want to.

By Dr. Crowell: Do I understand that the Secretary is to put forth the same effort to get the laymen interested in this Society that he does to get the physicians interested? If so, I think he should be so instructed. That will require quite a good deal of work on the part of the Secretary. It will require a great deal of work to get all the people in the State of North Carolina and the physicians in this Society.

By Dr. Minor: I have never seen anything in this world that was worth anything at all, that was not worth working for. I have never seen anything in this world, except love, that you could get without paying for it.

By Dr. Paison: I cannot agree with Dr. Minor in saying that love is the only thing you can get without money. Love is the most expensive thing in the world.

By Dr. Minor: We have got to put our souls into this work. We have got to hustle for the Secretary. He will not have time to do all the work himself. We must help the Secretary. We are not going to be successful in this work unless we get the laymen to co-operate with us. If every doctor who belongs to this Association goes out and gets one new member it will increase the membership of the Association. I realize that it means work, but I hope we will keep it always in our minds, and do everything in our power to make this work successful.

By Dr. Crowell: I do not want to oppose

it, by any means, but going after the laymen means a great deal of work.

By Dr. Minor: If the love of our fair women is not free, at least we are entitled to their prayers.

By Dr. Faison: When I tell you love is not cheap, I know what I am talking about. I tell you the man who loves his church most, pays most. I know the man who loves his wife most, spends most; the man who loves his children most, they cost him most, and the man who loves liquor most, that costs him most.

By Dr. Williams, of Greensboro: I make a motion that we send a telegram of congratulation to Governor Kitchen.

By Dr. McAnnally, of High Point: I second that motion.

By Dr. Minor: I also want to second that motion. We want the Governor not only to feel that we have our eyes on him, but we want his eyes turned on us, and we want him to be interested in the work in which we are engaged.

By Dr. Dunn, President: Gentlemen, you have heard the motion that this Association send telegram of congratulation to Gov. Kitchen. Is there any discussion?

By Dr. Paquin, of Asheville: Do you not think it would be well to appoint a committee to send or draft this telegram, using suitable language,—such as is best.

By Dr. Dunn, President: All in favor of appointing a committee to send this telegram of congratulation to Gov. Kitchen, make it known by saying Aye. (Unanimous).

By Dr. Dunn, President: I appoint Dr. John Roy Williams, of Greensboro, Dr. Paul Paquin, of Asheville, and Dr. McAnnally, of High Point, a committee of three to send a telegram of congratulation to Governor Kitchen on behalf of this Association.

By Dr. Julian, Secretary. Gentlemen: You understand that we have a stenographer here, and we expect to pay her, of course, and I would like for every member to come forward sometime during the day and pay their dues. We are now in 1909, and I would like for all to pay your dues. We have expenses, and they must be paid. I want to get your names, too, and I would like to have new members.

By Dr. Dunn, President: I appoint Dr. Minor and Dr. John Roy Williams as assistants to Dr. Julian.

Tubercular Prophylaxis.

By Dr. I. W. Faison.

Mr. President:

My paper today deals with just one phase of tuberculosis. This phase is its prevention. I shall address myself both to the

physicians and also you people who have come here to learn what you can concerning tuberculosis, but especially how to stamp it out of existence.

To fully comprehend this phase of the subject, let me ask a few questions, and if I can answer them to your satisfaction, from a scientific standpoint, then a long stride toward the end in view, for which we have assembled, will be made.

First. What is tuberculosis?

Second. What is its cause?

Third. Through what channels do the tubercle bacilli enter the body, and what tissues do they first attack?

Fourth. What can we do to prevent it?

First. Tuberculosis is a chronic, communicable, infectious disease. By this I mean to assert that it is neither contagious nor inheritable. I know that this idea will not meet the conclusions of many of you, still I am thoroughly convinced in my own mind that this fact is conclusive, concerning this position, which manifests itself by fever, night sweats and loss of weight and strength.

Second: The cause of tuberculosis is scientifically settled beyond controversy to be the "tubercle bacillus" which was discovered by Dr. Koch, 1882. The proof of this fact is that these bacilli are constantly present when the pathological condition known as tuberculosis exist in the human organism.

Third. We recognize five channels through which infectious causes travel to make entrance into human organism, namely: 1. Contagious. 2. Communicable. 3. Neither contagious nor communicable. 4. Abrasion. 5. Intermediary hosts. The channel then through which these bacilli enter the organism is the communicable channel and enters through the respiratory system by inhalation, and the digestive system by swallowing, and most often in the milk, attacking first, in the respiratory system, the mucous membrane of the nose and throat, then the lymph nodes and bronchial glands. In the digestive system the mucous membrane of the stomach and intestines, then the mesenteric glands, then lymph nodes, glands, and joints and bones throughout the body.

Accepting these facts as settled and true, which I unquestionably do, we must come to the fixed and wise conclusion that it is truly a preventable disease. Then the next and last question to answer is the fourth, how can we prevent it?

These settled scientific facts are wonderfully long strides made by our profession within the past twenty-five years to reach the highest position where we can proclaim to the world that we know these facts, and can say to the world without fear of failure

that tuberculosis is absolutely preventable, that we hold the key to the situation and can dictate to the world the means by which it can be prevented. When the statistics of this great country of ours figures that one hundred and fifty thousand of our people went to their eternal resting place through tuberculosis last year, in the name of humanity, is it not due time for our profession to cry aloud and call a halt to the devastating inroads of this awful little bacillus, and force our profession as a whole, together with the people, to hear and heed this the sound of our alarm?

This question of how to prevent tuberculosis at once becomes one of the most important questions for a correct solution that has ever forced itself upon our profession. We must meet it like men. The natural enemies of these bacilli are: Rain, sunshine, air, food and clothes. In their habits the bacilli as all other evils—love darkness rather than light. Hence they live longest in the dark, damp places. We know that they reproduce and multiply themselves only in the human body. Each day a patient, in the consumption stage, in his sputa and other excreta throws off millions of bacilli. Hence all consumptives become a menace in the household in which they dwell unless every scientific means is used to protect against it.

The tubercle bacilli, first of all, select houses to inhabit. This establishes and proves the clinical fact that at least half or a greater per cent. of all cases of tuberculosis are contracted in houses. Other places such as sleeping cars, street cars, stores, public conveyances, workshops, factories, streets, school houses, churches, prison camps, and jails have their dangers in this way.

It is not my purpose to alarm you beyond the merits in the case. I would not be honest with you if I did not tell you that tuberculosis is not such a very easy disease to contract. Nature in her wisdom places sentinels at the portals of entry to arrest and keep these bacilli out. Time and time again they are successful. At some unguarded moment, when all of nature's efforts are outnumbered, these bacilli succeed in entering and beginning their slow march to death. It is the continued dropping of the water that wears the stone away—so also it is the continued implantation of these tubercle bacilli into our bodies, before the actual condition of tuberculosis exists. Many times they enter, pass through their cycles producing tuberculosis, resolution takes place, and cure is the result. Many times the autopsy table has demonstrated these conditions.

To bring out what I have been trying to

say a little more clearly, let's look at it in a clinical way. Take as a starting point a newly born babe. Follow it through the many varied steps and conditions as it shall go through life; study its predispositions and environments; let its mother be a victim of tuberculosis, its father a worthless alcoholic; still the child is full weight, plump, and to all appearances in full form and health, as I am glad to say that the majority of all babies born in this world are. This gives me a starting point from which to take this baby, raise it and keep it free from tuberculosis.

This child from its alcoholic father inherits a predisposition to any and everything, even tuberculosis. It does not inherit a predisposition to tuberculosis from its mother, though she is suffering from it. Its danger is in her care after it is born. I know that many of you are ready to take issue with me just at this point. Still I am fully persuaded to adhere to this opinion. To bear me out in this: Take the Jewish race, one that has seen more tuberculosis and dealt directly with it longer than any other race on earth, still the clinical facts are clearly established that as a race they contract tuberculosis less often and get well of it much easier and quicker than any other people. This is due to a long fight and a race immunity to it, while the negro race—comparatively a new race—readily contracts it, and speedily die with it, their race immunity has not been established.

With these facts before me, I am fully persuaded that children who are lineal descendants from tubercular ancestors inherit this intrinsic immunity more or less. I am free to admit that the first step in our child's life is to aright the environment. This must be changed, and completely changed. This is the first step toward this prevention.

The mother should neither nurse nor care for this child. If either, nursing will be less dangerous. The feeding problem at once comes up to be scientifically arranged. The milk from the cow is the proper solution. We know now that through cow's milk tuberculosis is transmitted to the human race.

This brings us face to face with the milk question. To settle this at once and justly, every cow that is to furnish milk must be treated with tuberculin. Hygienic surroundings and clothing play a very important part in the child's life. The people who make fashion-plates neither know nor care how to clothe this baby. You doctors must learn how and insist that the mothers follow your advice.

How often do we see children, on cold and drizzly days, tripping along the street in what their foolish fond mothers think in

the very pink of the fashion, with four to six inches of their bare legs exposed to cold blowing rain. Just a short while of this kind of exposure is sufficient to cause a catarrhal condition of the throat and stomach, the two most important gateways for the entrance of these bacilli. Not only children, but young ladies do no better.

A few days ago I saw on the streets here a handsome young lady with her fur muff and cape, with heavy winter dress, with magnificent carriage, come meeting me; as she approached I was amazed. All this winter apparel. Her feet attracted me, covered with very low, thin sole slippers, and stockings, that in a box with a dozen pairs thick would not look black. I should say they were bought for black, though they were to me flesh colored. How can ladies keep their feet warm, clad in such stuff? With feet clad this way, how can they expect to avoid sore throats, which will open the gates to their lovely citadels to these deadly bacilli?

The important age for school life has arrived to our child. Through the changes, predispositions, environments, etc., we have safely cared for it to this good time. What shall we do now? I believe the school board should pay more attention to the physical conditions of the teachers in our schools. We should have strong, healthy teachers. If the least suspicion should rest in the minds of the board toward tuberculosis then the tuberculin test should be used and the question settled. These delicate teachers, if tubercular, with their fastidiousness to spit in their handkerchiefs, as good manners rather than throw it out, will at once become a danger to the children, where she must constantly come in contact with them.

One step further. The law today is that no child can attend the public schools in this State unless they have been vaccinated. Am I too far advanced in my views for the times to advocate the testing of all children for tuberculosis before entering schools. Perhaps I am today. Why not? Would any of you rather your child would contract tuberculosis than smallpox? At this time may be too far advanced for it, but if the inroads of tuberculosis is not checked in some way the time will come when testing for tuberculosis will be compelled by law.

The child has at last passed safely through school life well developed, healthy and strong at the age of maturity. The gates are flung open and our grown child walks out into the world for the first time with new eyes, new energies, new motives and new hopes. Life is met for the first time as it is—with its sweets and bitters—its good things and evil things. Today many chances

for contracting tuberculosis, yea, too many chances confront our grown up child. One of the first things our child would want, or should want, is a home.

This brings me to discuss the house side of the question. I have already stated that half or a greater per cent. of the cases of tuberculosis are house contracted. This house question then is one of the most important phases, in their prevention. I am not going to speak specifically but generally in this matter. This is bad enough. Indelibly place these figures in your mind that in a given community among us that every time one white person dies with consumption three negroes die with it. Also recall the fact that the bacillus lives in dark, damp places. Go in the negro settlements in the cities and towns, look at the tenant houses throughout the rural districts, inspect the houses, if you please, furnished for laboring people of whatever race in any country; see how they are huddled together, with almost no air or sunshine; go to one of these houses and find a consumptive inmate—nobody to care for him—nobody to direct sanitary laws; he grows from worse to worse till death closes the scene. His people have spent all they have to care for him and bury him; no money left to pay rent; they move out; the house is vacant a few days; a casual cleaning of the floors and walls; another ignorant or don't care family comes along and occupies the house. The bacilli begin to sit up, watch conditions, sharpen their appetites and enter new pastures. A little while some member of the family has a slight cold, sick a week or ten days, improves, works a while, another cold, lasts a little longer, harder to throw off this time, finally improves to go to bed again in a short while. The bacilli have won, time elapses, another body is carried out of that house to the grave. This is only a picture of house contraction, a place well equipped to grow bacilli that will sooner or later reach perhaps the household of the very person who owns this house, who does not know or care for the condition. What is the remedy? Two important remedies I would suggest. Every city, town and county in the State should have a sanitary board whose business it should be to inspect the plans of every house to be built in the town, city or county, and absolutely forbid the building of houses unless the sanitary conditions are good. There is not a town, city or county in this State, I dare say, that there are houses for human beings to live in, that are not a disgrace to the community in which they are. The second suggestion I would make is that it should be the duty of some one to have cleaned and fumigated all these houses that consumptives have

occupied before any other person should be allowed to occupy them.

These suggestions in part hold good for jails, prison camps, and sleeping cars. To carry these many suggestions into effect, how shall we do it?

Shall I go too far if I suggest to this convention to take action by appointing a committee, with some of our best women, doctors, lawyers, business men, ministers, and shall I add, colored people, to frame a law covering these and other conditions, and go before the present legislature and have it enacted into law? Do I at once hear the same old wail: Need not go to the legislature; it would do nothing? This legislature is a representative type of the best people in North Carolina. They have the best interests of North Carolina at heart. This movement is in the right direction. They cannot afford to turn a deaf ear to our cry. I have faith in their good sense and judgment and believe they will meet us justly. If they will not, let's cry out against them and to the people two years hence. We can't turn back now. I believe the law should compel every town, city and county to make preparations for taking care of their consumptives. It will cost money, yes. Let the State provide a way to get the money, use it judiciously to this end, and no better money can be spent.

What was the hundred and fifty thousand people in the United States who died last year worth to the United States? How much was lost in time? what did it cost to care for them in the way of medical attention and medicine bills? what did the help to care for them cost? what did it cost to bury them decently? With all this cost, what did they get in return? Long black veils, black dresses and aching hearts.

The time is at hand, the hour for commanding and marching forward has already struck. Shall North Carolina falter and fail? I God's name, I say no.

Discussion:

By Dr. Minor: I agree with Dr. Faison in a great many things he has said. No good man expects everybody to agree with him fully, but when Dr. Faison reads a paper like that, every one should thank him. I agree with him in the sum total of what he has said. I realize that tuberculosis is not hereditary; but, if a child inherits the weakness, it has the tendency. There is another thing about which Dr. Faison spoke, and that is taking proper care of children. Do we doctors see that the children are taken proper care of? Do we see that they are clothed properly? Do we look into the conditions of the nursery? Not always. We are afraid to "butt in."

I know women are sometimes sensitive about the care of their children, but I know that if a doctor does it delicately, and the mother knows it is for the good of her child, she is going to follow his suggestions. So often I see little children and women with deformed, shrunken chests; if I had seen her when she was young enough, when a child, I could have prevented that. When you see a child growing up with narrow shoulders, stooping, with shrunken chest, if you have the care of that child, it is in your power to correct it. If we would do this, we would prevent tuberculosis.

Dr. Faison suggests ways and means of preventing the spread of tuberculosis among children in public schools. I believe he is ahead of his time, although he is an intelligent man. I do not think the child with a tendency to tuberculosis should be taken out of school and put in a school by himself. If the child uses the proper precautions, he is not a danger to the other children with whom he associates. The thing to do is to see that the child with a cough or expectation is taught to use the proper precautions, and is looked after properly by some one who understands what precautions should be taken, and to see that the child carries out the instructions given.

Dr. Faison has mentioned the danger of house infection. This is half of the danger, as outdoor infection is rare, on account of the sunlight and fresh air. That danger of infection, to the greatest extent, dwells in the houses of the poorer classes. Why? Because the sun never gets in; because there is not proper ventilation; because they spit on the floor. Why, I have actually seen a poor ignorant sick man, lying on his back and amusing himself by seeing if he can spit on the ceiling or on some spot on the wall. Where the rooms are kept clean, and proper precautions are taken, there is not so great a danger of infection. This danger decreases as the social scale ascends. It is the working class that suffers.

I have nothing more to say, except to thank Dr. Faison for his excellent paper. I think his paper, if published, would go far toward furthering our work in the State.

By Dr. Faison: There is a difference in my mind between inherited predisposition and not inherited. When I say "inherited" that does not necessarily mean that it comes from parents who are tubercular, but from parents who are physically weak. The worst comes from alcoholic drinkers. I would not take a million dollars for my opinion and the stand I take on alcohol, and take the other side. I would be afraid that my chance hereafter would go, and I would not take anything for that. I am against alcohol from start to finish. I am

here today to say that I would hang before I would give up my opinion on that subject. That is the kind of man I am. What I think, I say. I think as I please.

Now, I am persuaded, without the shadow of a doubt, that the child who comes down from tubercular parents is a safer child than one who did not come from tubercular parents. I stand here today, as one of the few doctors who is afraid of tuberculosis. It is the only disease on this earth that I am afraid of. I am not, and I do not propose to be personal in this; but I am not surprised at these Asheville doctors saying people ought not to be afraid of it; they make their living out of it. If a fellow goes in a bar room every day, he is not afraid of whiskey. If you stay every day with a tubercular person, it will not be long until your body will begin to shrink and shrivel, and you will begin to cough, and people will run from you. O, I have seen it! No man can tell me not to be afraid of tuberculosis. I would not believe him if he came from Heaven. I know enough about it. I am almost afraid to read about it in books. Dr. Julian persuaded me to write this paper, and since then I have studied tuberculosis as I never studied a disease in my life, and I have fixed opinions. Long ago I was told that tuberculosis was a disease with a tendency to get well. I went home and began practicing medicine, and everybody who came under my care, who had consumption, died. After going for thirty years in the tread mill of medical men, with my eyes shut to tuberculosis, and the causes, my eyes have been opened, and my mind has taken on new opinions, and if I had known thirty years ago what I know now, I would not stand here and make a fool talk like this, because I am fully persuaded, since I have studied book after book, since I have studied the broad sweep of tuberculosis, I am satisfied that none of the medical men today know any more about tuberculosis than they did thirty years ago, except its cause. The man who talks about tuberculosis in one breath and consumption the other, does not know what he is talking about. I have the last speech in this discussion, so I am going to say what I please. From the knowledge I have acquired in the last three months, and I know what I am talking about, I tell you the man who does not recognize the difference between tuberculosis and consumption, today, does not know how to treat it. I am not here to treat tuberculosis. I am not here to treat anybody. I am here to say what I think.

Now, as to children. I have my fixed opinion as to that. I don't know whether Dr. Minor has any children or not, and he probably doesn't know what they will do

and what they won't do. He says if you will tell these children how to take precautions, what to do, that they will do it. Why, don't you know if you tell a child not to do a thing, it will do that very thing, or die. I know children, and if a child has tuberculosis, I don't want him putting his arms around my child's neck; I don't want him kissing my child. If it becomes necessary to separate them, I say separate them. I know I won't be here long enough to carry out these ideas, but I can tell you what I think about these things.

The State Sanatorium for Tuberculosis.

By Dr. R. H. Lewis, Raleigh.

Inasmuch as there is to be another paper on this subject by the Superintendent of our State institution, who will, no doubt, treat it *in extenso*, I propose, in the few minutes that I shall detain you, to devote myself to one phase of such work—by far the most important in my judgment.

The main object in the conduct of all sanatoria for tuberculosis in this country, so far as I know, is the cure of the disease. There are hospitals for its treatment by the most approved methods. Incidentally they are educational in effect, but only incidentally. Now my claim is that the emphasis is put on the wrong feature. The sanitarian's work is not the cure of disease, but its prevention, and his calling is known not as the practice of medicine but of preventive medicine. The relative importance of the two is forcibly expressed in the axiom that, "an ounce of prevention is worth a pound of cure." While a certain proportion of cases of tuberculosis can be cured—quite a large proportion, 50% or even more of incipient cases under the most favorable circumstances it is claimed,—the ratio of cures to deaths, under the conditions as they actually exist is pitifully small and must ever remain so. Consequently the object of our Association and of all the agencies organized to fight this great foe of mankind is prevention. So the practical question, as I see it, is: What is the best method of conducting a sanatorium for tuberculosis to obtain the greatest results? My answer is: As a training school with a view to prevention primarily and to cure secondarily, and not as a hospital with the cure as the main object. Let us consider the question in the concrete, assuming in round numbers accommodations for one hundred patients; for which number we hope the Legislature now in session will provide in our own institution.

The Time Allowed.

As generally conducted, the time allowed each patient in the sanatorium is six months, so that two hundred would be

treated in one year. Of this number, if only incipient cases are admitted, 50%, let us say, will be cured, a considerable number benefited, while some will grow worse in spite of everything. The educational results of the sanatorium are secured through the influence of the patients after their return home, as object lessons to their families and neighbors. The all important thing in the prevention problem is the care of sputum, in which, and practically in which only, are the germs found. If this could be confined until destroyed in every case the great white plague would be extinct in a few years. One hundred having been cured, beyond continuing the out-of-door life, with regularity as to their habits and care as to their diet, would not serve as object lessons at all. So the net result in foci of instruction would be only one hundred per annum—really less, because a number of those benefited would have no expectation.

Now let us consider the sanatorium conducted, not as a hospital for the cure, but a school for training the patients in the proper management of their own cases, with a view to curing themselves and preventing the spread of tuberculosis to others.

In the first place the name of the institution should be changed from sanatorium to "The State Training School for Tuberculosis," so as to make definite and positive its object, in order to prevent any misunderstanding.

Patients should be admitted for a stay of one month only, but if, after trial, this should be found insufficient the school term might be increased. A thorough examination and accurate diagnosis should be made by the skilled Superintendent, and it should be fully recorded in detail, as should also the daily history for a month, in a book kept for that purpose for future reference. They should be taught in mass by daily lectures or talks by the Superintendent,—as is already done by Dr. Brooks, I am glad to say,—as well as individually, so as to emphasize such points as might be specially needed in each case. They should be persistently drilled in the methods of the best modern treatment of fresh air, sunshine, rest and the proper diet. They should also be made to understand the necessity of cheerfulness and hope, that courage and a rigid self discipline are all important and that for the most part those recover who sternly resolve to get well.

The "students" should be deeply impressed with their responsibility to the other members of their families, in particular, and to the public in general—they should be made to feel that it would be a crime to transmit the disease to others by their neg-

lect of the proper precautions. This instruction by word of mouth should be supplemented by a library of suitable books and reports.

Each "student" upon his or her "graduation," so to speak, at the end of the month, should be furnished with a placard on which should be printed the rules for cure and the rules for prevention, a fever thermometer, a supply of spit-cups, paper napkins, and wax paper bags to hold the latter—at actual cost. A promise to report weekly the history of the preceding week should be exacted, and in this way instruction and advice should be continued, as in a correspondence school. Immediately upon his or her return home the Superintendent should write a letter to the nearest of kin calling attention to those features in the management of the particular case requiring special care, and he should also, of course, answer any inquiries from the family physician.

The Death Estimate

A low estimate of the number of deaths from tuberculosis in the State annually is fifteen hundred. The proportion of living cases to deaths is, according to some authorities three and to others four to one, so it is safe to say there are in North Carolina today, in round numbers, five thousand cases of tuberculosis. By the usual sanatorium methods only two hundred, or 4 per cent. of this number could be reached annually, while by the school method twelve hundred, or 24 per cent., could receive its benefits. By the sanatorium method, on a most liberal estimate, the cures would amount to one hundred a year. As the modern and most successful treatment of tuberculosis is not by drugs but by a mode of life, in which the twelve hundred would be thoroughly trained in the school, and which mode of life, with letters of advice from the Superintendent and occasional visits from the family physician, could be followed almost as well at home as in the sanatorium, there is no doubt in my mind that, while the proportion might not be so great, the total number of cures would be very much larger, two or three times as many certainly. But this would not be the greatest benefit derived from the school method. Every case of consumption in which the proper precautions against spread are not taken is a source of infection to others, especially to members of his own family. The thousand cases that could not be reached by the sanatorium, remaining at home, mostly in ignorance of these necessary precautions, would probably transmit the disease to several hundred others, whereas if they were trained in the school this danger would be very greatly re-

duced, to say the least. Moreover, as they would return to their homes with the disease still present, they would follow the mode of life and take the precautions taught them in the school and would be real object lessons to any of their family or neighbors who might be similarly afflicted.

Educational Lines.

The campaign against tuberculosis must be on educational lines and I can think of no method likely to prove so effective to those most interested, the victims of the disease themselves directly and the general public indirectly. Think what the establishment of twelve hundred foci of instruction in the State every year would mean.

Having demonstrated, to my own satisfaction at any rate, the great superiority in results of the school over the usual sanatorium method I might add that another advantage to be derived from the change suggested is, being so far as I am informed unique in the annals of the world-wide campaign now waging against man's most deadly enemy, it would advertise our State to the world as one of enterprise and progress.

Discussion:

By Dr. Kirk: Gentlemen: I have listened to Dr. Lewis's paper with a great deal of pleasure. He has brought out some very important points, chief among them, the point of teaching the patient while the cure is going on. He places more importance on teaching the patient than on curing him; I don't agree with him there, but, while the cure is going on, it is important that they be instructed so that when they do go out again into the world to be useful citizens, they will be educated more. They will be in position, not only to protect themselves from the disease, but to protect others. They will be the foci of information to others about them.

Another thing of importance, and I think most of the sanitariums do this, is to give daily, or once or twice a week, talks, giving instruction to the patients how to care for themselves properly, and how to prevent infection and the spreading of this disease.

Another very important thing, is the constant encouragement of the tubercular patient, the everyday teaching, the dropping of a mark here and there. It is very important to encourage those who are despondent. Tuberculosis is a disease that takes a long time to cure. The moral support that any physician in charge of a case of tuberculosis can give to his patient, amounts to a great deal. Even with encouragement, there are moments when the tubercular patient feels like giving up en-

tirely, and a few words of encouragement may give them hope and tide them over.

I think Dr. Lewis's words are well timed, indeed, and if the State would take some action, we would have a good many graduates from his training school that would be a great good to the community.

By Dr. Faison: I don't want to discuss this paper. I just want to commend it. You can always expect something good when Dr. Lewis reads a paper.

By Dr. Minor: I want to thank Dr. Lewis for this excellent paper. That is the kind of doctrine we want to hear—teaching, teaching, teaching. Of course, we want also to cure, but whether treated in a resort or at home, we want to teach the patient how to take proper care of himself, and how to prevent the spreading of this disease. When we discharge a patient who looks in perfect health, but who goes home ignorant and without knowing how to keep well our time has been wasted. I have always said that I would rather see my patients go home moderately cured, and with some knowledge of what they are to do to get well, instructed as to the proper way to care for themselves, than to go home looking well and without any instructions.

Now, I know of a case, where a Doctor had a patient, a young man of whom he was so fond that he would not discipline him properly. The patient did as he pleased, he would drive when he pleased, go anywhere he pleased, take a drink when he pleased. He came back day after day to the sanitarium, a little sicker, and sicker, until he died. That Doctor did not teach his patient not to be a danger to himself, to his family, to his community. It was a waste of time.

You, gentlemen, every one of you, unless you have the personality, the ability, to teach these people how to care for themselves and protect themselves, their families and community from this disease, unless you do this, you will accomplish nothing. Tell them how they must do it. Give them a reason for doing it. No matter whether it be at a resort, at home, here or anywhere else, tell the patient how to take care of himself. He will get better all the time. Then, gentlemen, you get results.

Dr. Lewis: (Closes discussion of his paper.) Our program is long, and I hardly think it is necessary for me to speak further.

Government, State and Municipal Administrative Control of Tuberculosis.

Dr. W. H. Jones, of High Point.

Of the many and varied means whereby human life may be, and is deprived, of that

feeling of security, that is so necessary to the comfort and happiness of the beings who inhabit this planet; there is no one or combination, that militates in so disastrous a manner as tuberculosis. Humanity has never had so destructive and persistent a foe, with which to combat. It is one of the most ancient, and at the time of its first recognition, its devastating ravages were perceptible. Many cases of tuberculosis, were anciently designated assyphilis, eczema, leprosy, etc.; for this reason and the scarcity of etiological data, combined with a very meagre knowledge of pathology, which consisted only of the gross and none of the minute, led to errors, and the consequent lack of effort, as to its prevention.

It would be unreasonable for us to suppose, that civilized and educated nations as the English, French and Germans, should one and all have failed to grapple with a problem of such importance to their existence. I say, "unreasonable for us to suppose," if we grant that they possessed any accurate knowledge, or had any conception of the mortality, that it claimed both directly and indirectly. When they did begin to investigate the subject, all efforts were directed and expended in securing a cure, for cases that were well recognized and far advanced, and all measures looking to prophylaxis and prevention were entirely neglected. Time has proven the futility of their efforts, and we of today must direct ours to those conditions, that a few years ago were of no moment. The people being ignorant of the cause, cause, did not know by what measures they could rid themselves, of this destructive intruder, and consequently their apparent lack of effort. We of the present day and generation cannot plead ignorance and superstition, and on these places the cause, of our lack of effort. We are a cheap and indolent nation, continually talking and saying what we will do, and this is about the extent of our efforts. Talk is cheap and costs nothing. You do not have to literally knock an American down before he is aware of your insult. Yet tuberculosis is doing far more and pronounced damage to our population and citizenship, and we stand idly by, patiently hoping that the Lord will come to our aid. The Lord helps those who help themselves.

There are some who have seen the writing of the hand and have been able to interpret the Mene Mene Tekel Upharsin, who have been aroused from their lethargy, and are now waging a fight which bears every indication of future success. Let us not be drones, but go in and assist in the defeat of this, our common and undefeated enemy.

Our Government and State by means of

legislative enactment, have conquered smallpox, almost completely routed syphilis, diphtheria has lost its terrors; yellow fever never arises *de novo*, and leprosy is a curiosity. This has been due to the fact that the people demanded legislative intervention, the same not being denied them, they were enabled to conquer.

Let us consider a few figures, in comparison of tuberculosis with other death producing diseases. Tuberculosis last year was the cause of 37 per cent. of the deaths that occurred in one of the largest labor organizations in this country, which per cent is far in excess of any that diphtheria, syphilis, smallpox, and yellow fever, combined and in their most palmy days were able to produce. It causes annually more deaths than whooping cough, convulsions, diphtheria, meningitis, typhoid fever and cancer combined. Statistics are so boring that I shall refrain from mentioning figures, further than to say that tuberculosis was the cause of 12 per cent. of all deaths, occurring in the U. S. in 1907. These figures sufficiently impress the great necessity that is apparent. There are two ways whereby we may lessen the ravages of the Great White Plague: First, education of the masses as well as the classes. Second, legislation, and legislative enforcement of regulations.

As prevention is the crying need of the people, so it is by prevention that we are to accomplish what good is to be of lasting benefit. As the object of all campaigns against disease, is the prevention of that disease, so it should be in regard to tuberculosis. It is a self evident fact, that the people must of necessity, be thoroughly and clearly informed. We have existing at present, a very good example of the lack of a thorough and clear understanding of tuberculosis, and one that is exerting a very detrimental effect upon the prevention and cure of this disease, I have reference to the condition known as phthisophobia, or the insane fear of tuberculosis. The old adage, "A little learning is a dangerous thing, drink deep or taste not of the Pierian Spring;" is fully exemplified, for what the public now has in the way of knowledge of tuberculosis, is more of an hindrance to the work, than if they were entirely devoid of information. This phthisophobia must be overcome, or its extension must be stopped, before we will be enabled to gain any perceptible headway, and I can conceive of no more practical and efficient way than that of education.

Hospitals, dispensaries, sanatoria, and camps, have great influence in alleviating or even curing those that are already affected with tuberculosis, or other infectious

diseases, but their greatest influence in checking the spread of disease is to be found in the education of their inmates, as to the precautions that are necessary, and the proper manner of life to pursue. These institutions are schools in which hygiene is taught, and whenever a case leaves an institution, a new teacher has gone to be a missionary to his or her respective community. These are the people who are already infected, and their circle of influence is consequently limited. Then their influence reaches only the adult population, whose conceptions and habits are already formed, and who take on new ideas less readily than more youthful minds. They are of a day and generation that is passing rather than of a generation that is coming, and are therefore of little value in the prevention of disease. Whereas were this influence directed upon the more youthful members of the community, the boys and girls of today, who constitute the coming generation of workers and parents of families, there is no estimation of the amount of good that would be accomplished.

Of all educational propaganda, the organized school system, is far more extensive and efficient than any special agency that might be created. As it is the early lessons in life that count, and are the most productive of good or vice versa; so by the education of the school children, will we lose or win in the fight against the foe. Our schools have in their curricula hygiene, in this the prevention of disease in general, and tuberculosis in particular should be taught. This course should be practical in every particular, that the students may see the great benefits to be derived from the same, and that its effects may be of lasting and permanent benefit.

A commission should be appointed by the Government or State Bureau of Education, and the respective association for the study and prevention of tuberculosis, to prepare for the use in the school, proper synopses so as to ensure general respect, and exert the maximum amount of influence. This could be placed before the teachers of the State, county boards of education, teachers associations, etc. Our teachers are an educated and enlightened body, who are alive to the dangers, and will welcome assistance from those entitled to speak with authority. Such information should be graded as are the other courses in our schools, and in a clear concise manner cover subjects as: What parts of the body are most often affected by tuberculosis, why it is especially dangerous to others, and how the germs of infection are carried, etc. What conditions favor its development,

and how best to prevent it. Many of our high schools and colleges are engaged in this line of work, and these will eventually win over the smaller schools; but as a nation we cannot sit idle, in this age of progress and wait on time to bring about such a condition, but we must take time by the forelock. The Swedish government has gone into the fight, and in the short time that they have been interested as a government, the results have been apparent. They require all who seek appointments, in the schools to present a physician's certificate as to health, and should they become incapacitated, from whatever cause, they are given a year in which to recuperate, at the expiration of which time, if they have not fully recovered, they are dismissed with as little pecuniary loss as possible. No child should be allowed to enter school who is known to be tuberculous; and further laws, regarding the school buildings and grounds, the way and manner in which the same shall be erected and maintained. While we all recognize the wisdom of such measures, and not in a days journey will you find any sane person who thinks otherwise, and with all this opinion and belief in the benefits to be derived from such measures, we have none on our statute books. We must incorporate into the curricula of our schools as thorough and complete a course in hygiene, as is possible, that the coming generations may be ready for the emergencies of life, by being fortified with an understanding of how to avoid preventable diseases. Until our schools shall have made this provision, we cannot hope to successfully cope with tuberculosis or other infectious diseases. The younger ones should be taught the formation of systematic habits of hygiene, a love for cleanliness, and neatness, and for out-doors amusements, the course should be so arranged that every pupil at graduation would have as complete mastery of the fundamental rules of health as he has of spelling, reading, writing, etc. By these means we would not only raise the standard of education, but what is more important, that of our citizenship, and would thereby be enabled to confer a permanent and lasting benefit upon humanity.

I am thoroughly convinced that the only feasible, and at the same time, practical way of eradicating this disease, is by the means of education through the public schools, and my reason for this is due to the fact that a close perusal of the history of all things which have attributed to the happiness and security of mankind, have been due to education.

The ultimate attitude of society towards such problems as this has not been due to

the discussions that took place in the daily, or weekly press, but to that attitude which was taken and secured by the children during the years of school life. Our daily acts are not predominated by the results of thinking, but are, and must of necessity, be primarily and principally automatic. Conduct then is the thing to be sought, and not merely intellectual information. With the reconstruction of society, due to the development of a democracy which depends upon the intelligence of its citizens, the State was compelled to adopt general education,—not primarily on account of the elevation of the individual, but as a means of self protection and self preservation. For these reasons the State must by the aid of the same agencies, viz., those of education, protect itself from the ravages of disease, which are due to ignorance with reference to the fundamental facts of hygienic life.

Health and education must go hand in hand.

When we have inaugurated such a campaign, and the people see that it is the most feasible and practical way of eventually decreasing the mortality of tuberculosis, and at the same time not being of the least disadvantage to any individual, even though that individual himself be affected. We should be enabled to enlist every one in the fight, for the proper education of the school children, by which means we will diminish the tuberculosis of the future. We have now reached that point in our existence as a nation when we must do something to enlighten the burdens of the coming generations, if we hope that our descendants are to survive us long.

We must pursue such a course as will lighten the burdens of the coming generation, that they may effectually carry on the fight, which we have begun, to the complete extermination and expulsion of this deadly disease. Yet we must not overlook the dangers to which we of the present are subject, and we should in justice to ourselves advocate the inauguration of such measures as will minimize our liabilities, as much as possible, and at the same time refrain from those extreme measures that would tend to make the life of those who are infected, any more burdensome.

In order to protect the present generation, it will be necessary to resort to legislation, and legislative enforcement.

Governments are formed for the security of the property and lives of their citizens. It protects the lives of its citizens from foreign foes, even though that citizen be in the territory of this foe and not on his native soil, at his home he is free from the attacks of other nations, so long as he properly conducts himself he knows that he

can travel when and where he desires, and all the time the strong arm of his government is protecting him. At home he is protected against the lawlessness of his own country, where justice is dispensed without favor of class or individual. The government provides large and expensive armies to protect those on land, and maintains a navy of numerous iron clad vessels to prevent the invasion of foreign foes. All this is as it should be and a government that does less than this cannot long survive, if we know from precedent, but this is not sufficient for a government of today. In these days of enlightenment and civilization, enlightened and civilized measures, for prevention and protection are necessary. Science has shown that disease is the most destructive agent, to both property and life, and further that most diseases are preventable, so a government that does not make strenuous efforts to protect the lives and property of its subjects, from disease, fails in the essential duties devolving upon it as a government.

We know that tuberculosis is very destructive in both property and life. The death rate in this county is very close to 250,000 per year, and the financial loss sustained is almost beyond computation, for when we think that there is not only the loss of the out-put of these cases, that they are consumers and non-producers, more than this, it would be a conservative estimate to say that each case infected requires one other individual to produce and sustain each infected case, for at least one year previous to death, which would amount to the enormous figures of 500,000 subjects, being incapacitated in the U. S. every year; this to say nothing of the lives that are irrevocably lost, and the consequent suffering of the individual, previous to death, and the anxiety and grief of relatives.

Of the first and most important efforts to be put forth, and one that is absolutely and essentially necessary to the future success, of any plan, for either the cure or prevention of tuberculosis, or any disease, is the harmonious combination and cooperation of the medical profession. If we are not of one mind and in full harmony with the movement, then every effort that is put forth will be handicapped, and many that are absolutely essential, will fail, from lack of unity of our profession. There is too much skepticism in our ranks, and to this may be attributed much of the phthisiophobia that is prevalent, and is thereby acting as a detriment to many measures that are necessary to advancement.

First, we must demand an accurate recording of vital statistics, not alone of the

State, but of the United States, as this will be a source of information as to the present importance of the disease, and will enable us to know by comparison, whether the restrictive work that was inaugurated by the International Congress, is bearing practical results in lives saved. By these means we would be able, without the loss of much valuable time, to ascertain just what measures were the most productive of the best results, by the adoption of which we would sooner gain the mastery, and by diligent pursuance of that plan by which we had been enabled to gain this advantage, effectually reduce the mortality figures. This is not a theory whose practical results have never been proven, but one that has been tested, and has filled every requirement for which it was advocated.

New York is far in advance of any city in the world, in regards preventive measures in general, and tuberculosis is particular. This has been due to the strict regulations that have been passed, the same when they once became laws were not permitted to remain only on the statute books, but were put into execution. They demand registration of all tubercular cases, by hospitals. Dispensaries and camps, and that the physicians report all cases under their care, and those who are under neither the physician or hospital come under the jurisdiction of the Board of Health. They have further strict regulations as to expectoration, which are rigorously enforced. By these laws New York has cut the death rate from 4.42 to 2.41 per 1,000, in the last ten years.

A case of tuberculosis is as much of a menace to the community as a case of smallpox, and should have as efficient quarantine regulations regarding them. While it is not necessary or desirable that these measures be called for the isolation of the cases that are infected, nor is it to be presupposed that these cases are brought to the notification of the authorities in a manner that is undesirable.

Every case of open tuberculosis of the lungs or larynx, is a source of danger, not alone to those with whom he comes in contact, but on account of the fact that he infects the houses in which he lives, and thereby spreads the disease to untold numbers, and for how long such houses are a source of infection no one can say. The Inner Council of the International Association at Vienna, passed resolutions, emphasizing the desirability of gradually extending compulsory notification in all cases of tuberculosis, and we should demand such measures, as being absolutely necessary.

We should have such a law that would compel the landlord to disinfect the houses

wherein tuberculosis or other infectious diseases had been known to have inhabited, or wherein a case had died with an infectious disease. This law should further compel the landlord or tenant to keep the premises in a hygienic condition; the violation of which should be a fine, and for repetition of the offence, imprisonment.

By such measures we will be enabled to protect ourselves and the present generation.

By Dr. Dunn, President: On account of the scarcity of time, and the similarity of Dr. Jones' and Dr. McAnally's papers, I will leave discussion of Dr. Jones' paper until after Dr. McAnally reads his, which comes next on the program.

Tuberculosis and the State.

By Dr. W. J. McAnally, High Point, N. C.

Tuberculosis being prevalent in our State and destroying about 10% of our people, and entailing enormous financial loss, it is therefore a question competent or proper for the State to deal with, and especially is this true, since it is known that tuberculosis is a curable and preventable disease.

As the protection of life and property was the chief motive which originally lead to the organization of governments and the creation of States, it may be well to see if North Carolina, as regards tuberculosis, is measuring up to this fundamental duty as a commonwealth. If she is not doing her full duty, let's learn why she is not. We can't plead poverty along this line. For the support of the State Guards we are paying out of the State Treasury \$420,000 annually. Not a single soldier was called upon to protect the property or life of a white man during the whole of last year. We need these soldiers, and few, if any, regret the expense. For the hospitals for the insane we are spending annually about \$400,000. Yet we have as many deaths from tuberculosis every year as there are insane persons in the State. Tuberculosis is ten times more prevalent than insanity, and there is much more encouragement to attempt its control because it is preventable and curable.

We do not regret the \$400,000 for the insane, but we fail to see the consistency when one considers that insanity destroys less than 200 lives annually, while tuberculosis makes its draft on the State for about 2500 lives. Yet for the care of the tubercular, our Hon. State Auditor has estimated the expense for this year, 1909, at \$5000. There are in North Carolina at this good hour probably 5000 persons disabled on account of tuberculosis, estimated disability at two years prior to death. The financial loss in North Carolina on account of tuberculosis must necessarily go into the

millions every year, for each of the five thousand disabled on account of tuberculosis must have the attention and care of at least one other person. They are not only non-producers, while remaining consumers, but hinder production on the part of others.

It should be remembered that a considerable number of those who perish of this disease are young adults, who, if kept well, would be worth to the State over \$20,000 each.

Over \$400,000 is annually expended for worthy and brave ex-soldiers of the Confederacy, and we all wish that they got thrifble that amount. But there should be a few hundred thousands expended annually to maintain an army as brave as these men, to wage relentless warfare upon this our common enemy, Tuberculosis.

For the cause of general education our State Treasurer is disbursing yearly over \$700,000 and employing thousands of instructors, and yet with all this machinery and its enormous outlay, there is no systematic effort, and almost no effort at all being made to instruct the pupils in the State schools in the simple and fundamental precautions necessary to avoid contracting and spreading of tuberculosis.

Gentlemen, I tell you that our State has strained at a gnat and swallowed a camel. We have appropriated money towards the support of two idle armies, appropriated thousands for maintenance of public schools, a large part of whose curricula are as useless and antiquated as Noah's Ark, and the mastery of which makes no student either healthy or more productive. Sentiment has induced us to see and perform our duty to the insane, but ignorance or savage stoicism has caused us to close our eyes to a far larger and more important duty we owe the tubercular of the State. A \$5,000 present to a battle ship has seemed, to our legislators, as worthy a cause as that of all the tubercular of the State.

Why may not \$1500 or \$2000 be appropriated by our legislature to secure the services of the Medical Faculty of the University of North Carolina in selecting or arranging the material for a graded course of instruction in sanitation and disease prevention, which shall be taught in all the schools of the State, which are supported either wholly or partially by taxation.

Then the day will dawn when tuberculosis, hookworm, malaria and typhoid, epidemic and contagious disease, will begin to fold their tents and depart from our midst. There is nothing alarming in our situation, except the blarney and ignorance of our politicians and legislators, who have gone up and down our State for over 100 years, patting diseased and ignorant men on the

back, telling them that they were the greatest people on the face of the earth, while they did little to alleviate their woes and better their condition, while stubborn statistics show us that only one other State of the glorious Union has an English speaking white population standing lower in the scale of illiteracy.

Are we too poor to follow the example of poverty stricken Sweden, which is patriotic enough to attempt to save her people from some of the contagious diseases, by sending out corps of scientific men with lantern slides, who give free instructions throughout the kingdom in the fundamental principles of sanitation and disease prevention, and attempt to lift their people out of their hovels and dirt and disease.

Discussion of Dr. Jones and Dr. McAnally's Papers:

By Dr. Minor: I heartily approve of these papers, but I want to say one thing: As a matter of policy, that before his paper is published, I would suggest that Dr. McAnally's complimentary remarks about the illiteracy of the State be stricken from the paper.

By Dr. Smoot, Concord: I received, sometime ago, a letter from our Secretary, Dr. Julian, asking me to write a paper on this subject. I looked over the field, and thought it so big I did not know where to commence. The subject has been discussed for ages. I feel that we get near to a cure, and yet we may be far from it. Some scientists say they almost have a cure in their grasp, and we do not know what they are going to prove in the near future.

I want to endorse one idea Dr. McAnally has advanced. That is, that of establishing this sanitarium for the cure of tubercular patients. This is a good idea, and greatly to his credit, but it seems to me the cheaper plan would be to ask the State to set aside a fund or an endowment fund as a means of support for scientific investigators to study tuberculosis, so that they would not be worried about a means of support, as most of us doctors are, and could devote their entire time to study of tuberculosis, and trying to find a cure for this disease. A number of the old countries follow out this idea, and set aside an endowment fund for the support of scientists who devote their entire time to the study of some particular object. I heartily endorse the thought that the Legislature be asked to set aside an endowment fund for the support of men who devote their entire time to an investigation of the cause and cure of this disease. I don't know what can be accomplished in that way, but we must sooner or later arrive at a cure, for the disease is one to be cured; yet we are far from arriving at the cure.

By Dr. Taylor, Morganton: It seems to me this question has gone further than we intended. It is quite impossible for us to force the legislature to do this. The question is, how much can we force the people under our charge to do? How much can we do toward getting our towns to enforce inspection and cleanliness and sanitary conditions? How much can we do toward getting better conditions among our poor classes? We must begin with the people first.

By Dr. Minor: I want to endorse Dr. Taylor's remarks. It is very nice to say the legislature must do this or that. Dr. Taylor hits the nail on the head. With our limited supply of money, let us use any we may be able to get for the purposes suggested by Dr. Lewis. This is in our line. Don't let us waste our time and money in things like those suggested by Dr. Smoot.

By Dr. Lewis: There is a special chapter in the text book used in our public schools devoted to the study of tuberculosis, telling what precautions should be used to prevent the spread of the disease. That originated in the city of Asheville. The paper was gotten up and submitted for inspection and was printed in the text book used in the public schools of this State, and the law requires that it shall be used in every public school in North Carolina. Dr. Stiles suggested the idea that there should be what is known as the Public Health League. Our town took up the idea, and after us, Winston-Salem, and he is quite enthusiastic over the subject, and I know his intention is to establish that League all over North Carolina. His plan is that a certain day shall be set apart for the study of this subject in every school in the State, and on the same day all the school children in the State of North Carolina will have the matter called to their attention and will have literature furnished them.

I want to say that the papers which have been read were excellent and the remarks made, good. I would like to say, in justice to the legislature, that they have a great many things to come before them, for their attention, educational and other things, and there is not enough money to go around, and the consequence is that when we go before the legislature we must ask them for something that appeals to them, as being common sense and for the best interests of the people of North Carolina at this time. We must be careful how we approach the legislature. I know if a bill is introduced in the legislature by us, asking for something which is not for the good of the State and does not fit the circumstances as they exist in the State, the attitude toward the medical profession in the State is thereby

undoubtedly prejudiced. Consequently, we must be very particular what we ask them. If we ask things that are not within their means, then they discount everything we ask. I merely say this from twenty or thirty years experience with the North Carolina legislature, and as Chairman of the Committee on Legislation, it is of vital importance to me.

By Dr. Jones: In reference to the legislature, I thought this State was so far behind other States that it might be years before the legislature would see that they were behind. If other States are doing this, if other States are getting results, why do we sit and see the State give \$5000 to getting a silver service for a battleship, when we need the money for this cause? We must educate the people to this; that is the very thing I want. Bring them up to it; make it second nature. If children can learn hygiene in one week, they can do more than I did.

By Dr. McAnally: I believe we must follow the example of other countries in this thing; I believe that this must be done through the legislature. They treat us like we were dogs. They spend hundreds of thousands of dollars for votes by giving it to the Agricultural Department. We can tell them, if necessary, that they are a low-down set; that they take the money and use it to secure votes, and neglect the health of the people of the State. I am sort of a fighter and it makes me mad when the legislature lets people die and go to their graves and never do anything for them. They paid out thousands of dollars for attorneys fees last year. Why don't they help the medical profession? Why don't they help to save our people? I want to see this association present a bill to the legislature; let them pass it or not, as they like. We want to do our duty.

By Dr. Williams, of Greensboro: Reads telegram to be sent by Committee, to the Governor, as follows:

"Hon. W. W. Kitchen,
Raleigh, N. C.,

The North Carolina Association for the Prevention of Tuberculosis, now in session, presents its sincere and hearty congratulations to both you and the State upon your accession to the office of Governor."

By Dr. Dunn, President: This closes our session this morning, and the meeting will come to order at 3 o'clock this afternoon.

AFTERNOON SESSION.

By Dr. Dunn, President: The first paper on our program for the afternoon is by Dr. Crowell, and the subject is Genito-Urinary Tuberculosis—Report of Cases; by Dr. A. J. Crowell.

No Discussion.

Dr. Dunn requests Dr. John Roy Wil-

liams, of Greensboro, Vice-President, to take the chair.

The Role of the Tuberculosis Dispensary.

By Dr. T. A. Mann, Durham, N. C.

Tuberculosis is of more importance at this stage of the world campaign as a social than a medical disease. The members of this Association seem to have realized this fact, since out of the thirty-eight papers on the program twenty-eight of them deal with the social aspect. Effective work at this time depends more upon advance of social and economic procedures than upon an application of medical measures. Though in the near future we may succeed in getting a more perfect specific antitoxin to be artificially administered, it looks now as if immunity must be brought about chiefly by obedience to the laws of hygiene, thus building up a natural resistance. Properly speaking we have already perhaps gone far enough to recognize the most available and economic resources, but there are peculiar conditions affecting different localities which must be dealt with accordingly.

In North Carolina we have three things which deserve special consideration: First, Factory conditions; second, rural conditions; 3rd, the negro. Most of you are acquainted with the class of people we have in our cotton and tobacco factories of this State. They are for the most part ignorant of the laws of hygiene and sanitation. Many of them can do little more than read and write, and oftentimes we find children in the factory when they should be in the school room. Thus these young citizens grow up stunted, both mentally and physically, for they cannot develop well in this formative period of life when working from day to day with the regularity of a machine. Very often we find a whole family working in a factory, leaving no one at home to keep things clean. Thus in many homes one is confronted with dirt and filth. These conditions, as you all know, tend not only to provoke consumption but other diseases.

In our rural sections we have such conditions to deal with as have recently been pointed out by the Country Life Commission. Hook worms and other preventable diseases so lower the resistance of individuals that they are an easy prey to tuberculosis. Though we do not have to contend with crowded quarters in the open country districts, and though the air is fresh from the forest, we still have tuberculosis and will continue to have it until the people learn how to fight it. There are many homes in rural Carolina that are dangerous. For years they have harbored the germs of tuberculosis and whole families have been taken off one by one.

Flies are very abundant in country districts, for the people have not yet realized the importance of cleaning their stables daily or weekly and screening the manure, nor have they learned the importance of rendering fly proof the ordinary open dry closet. There is no way of telling accurately what part the fly plays in the transmission of tuberculosis in our country districts. The writer knows of one house in which within the last fifteen years three different previously healthy families have lived, and each family has lost from two to three of its members from this disease. Whether carried by flies or by direct contact we do not know, but we do know that in North Carolina we have many similar cases.

The death rate from consumption is higher in rural districts than is supposed. It is very unfortunate that we have no mortality statistics to show the exact rate. I hope the present legislature will pass a bill requiring all counties to register deaths and the causes thereof. The third condition, and in some respects the most important one, is that of the negro. Though we do not have the difficulty of language or high, illy ventilated tenements, which confront the large cities, with which we must deal, we have this race of people classed by Anthropologist as the lowest in the scale of races. Men may theorize about the transportation of the negro to his native Africa, they may easily present plans for colonizing him in some other place, but we have him here with us as deep rooted in our Southern soil as the white man himself. We must accept him as a part of our social system, and for his, as well as our own safety, take steps to save him from the ravages of this dread disease which on account of his habits is so fatal to him.

With these conditions confronting us what are the most available and economic procedures to meet them?

First. Popular education by literature, lectures and personal visits.

Second. Enforcement of laws bearing on tuberculosis.

Third. Hospitals, Sanitariums and Colonies.

Fourth. The Tuberculosis Dispensary.

It is to the dispensary and its usefulness as a factor in this campaign, that I wish to call attention. To Dr. Calmette, of Lille, France, is due the credit of popularizing this plan of work against tuberculosis. The record of Edinburgh, Scotland, as set forth at the recent conference at Washington by Dr. Phillip, of Scotland, who first made use of this plan, is sufficient proof to satisfy the most skeptical of the importance of work along this line. Though there is an intimate

relation between all of these resources, the dispensary should be made the center from which the administration of the tuberculosis fight should be controlled. It has a vital relationship to each of the factors enumerated.

Dispensary Includes:

In describing a programme for a dispensary we can easily see this. It includes:

1. The reception and examination of ambulatory cases who present symptoms suggesting the possibility of tuberculosis, the keeping of a record of every case, covering the family, the past and present history, and a supervision of the daily chart recording the clinical symptoms together with a detailed account of the daily diet.

2. The supervision and treatment of cases remaining at home, and of arrested cases.

3. The examination bacteriologically and otherwise of other members of the families of tuberculous patients for the purpose of detecting at the earliest time possible any secondary cases.

4. The proper distribution of cases to various institutions, according to the stage of the disease.

5. The headquarters for a special nurse whose work should be controlled by the dispensary staff and whose daily report should include an investigation of the dwellings and sanitary condition of the homes she visits and supervises.

6. The administration of relief and furnishing sputum cups, napkins and food stuffs, especially eggs and milk, to those in actual need.

7. The registration of the names of all tuberculous patients, obtained from the Health Department and otherwise, with a record of the location of each patient.

8. The instruction of tuberculous patients regarding the nature of their disease, and advice on all questions concerning tuberculosis in their families and to those interested.

Though some of the better classes of patients can afford private sanitarium treatment, the great majority of those suffering with tuberculosis in North Carolina are from the poorer classes. They are dying around us every day, and seemingly no notice is taken of it. Many of these people do not consult a physician until their trouble is rather far advanced, and even then do not get, in a great many cases, anything but an inspection of their tongue, a feel of their pulse, a swift, useless auscultation of their lungs, and a prescription to the druggist for a tonic. The doctor knowing he will get nothing for his visit then goes on his way. No wonder the people are slow to consult physicians earlier when they

get such advice as this. The possible seriousness of their trouble is not mentioned to them and they remain ignorant of it.

The dispensary will be a great advantage to both doctor and patient to counteract this. The doctor can send his charity patient to the dispensary where on account of multiple careful examinations the patient will receive even better services than under the advice of one man. Though the services of the dispensary physicians will be free the physicians will not suffer, for the association with their fellow workers will benefit each one. As a factor in the popular education the dispensary plays an important role. The four best direct ways of popular education are by lectures, literature, teaching public school children and by personal visits. The teaching of school children will of course be of service to the next generation. It is very important and special courses of study on hygiene and the prevention of diseases should be taught in our public schools. Of the other methods perhaps the best is by personal visits. We can spread all the literature we wish and we can have public lectures, but the best results come from a visit by the nurse or physician into the tubercular home for the purpose of teaching the nature of the disease. In this connection I wish to speak of the relation of the nurse to the dispensary. She is indispensable. She is needed both in the dispensary and in the home of the dispensary patient. It is she who must carry sunshine, both literally and figuratively, into the homes of the unfortunate families. It is she who must teach the preparation of the food and the ventilation of the home. The work of the dispensary will be of little avail in lowering the mortality rate unless these details are attended to.

The enforcement of laws bearing on tuberculosis devolves upon the health authorities of municipal, county, or State departments, depending on the ones making an active campaign. The most important are laws controlling the food supply, the compulsory reporting of tuberculosis by physicians and compulsory fumigation of premises after removal or death of the patient. The tuberculosis dispensary should co-operate freely with authorities controlling these, for it is directly concerned.

Help in Reporting.

In reporting tuberculosis to the authorities the dispensary plays an important part. There is no doubt that until physicians become more awake to their duty to society and to the individual that a great per cent. of the cases reported will come through the dispensary. Though some of them realize that no effectual control can be had until

accurate knowledge is available as to the exact location of the cases to be dealt with, and that this can be done only through notification, there are some, yes, a great many who do not seem to care. There are many physicians who to this day do not inform their patients when they have tuberculosis. Yet our feeling toward a brother doctor who does this is not one of condemnation, nor is it one of pity. It seems a mixture of the two. Personally I cannot understand it, especially when I look around and see the great numbers who have been cured after having an early diagnosis and proper treatment, the latter of which no one can get without a proper knowledge of his disease.

To the sanatorium and hospital the dispensary holds an important relationship; for from its ranks can be picked the patients suitable for each institution. Another important role for the dispensary is to assist in getting suitable employment for its patients. This factor in the problem is a difficult one, for many men suffering with tuberculosis are forced to keep the wolf from their door by their own day labor. Unless their work can be picked for them the prognosis of their trouble must necessarily be very bad.

How shall the dispensary be maintained? On account of its social significance and because of its vital relationship to each individual, high and low, it seems to me that the best way is by public funds. The relation of charity organizations to the dispensary should be one of intimate co-operation. Tuberculosis is both a cause and a result of poverty, and organizations can best dispense their charities through an institution of this kind.

An Eternal Shock.

The problem of tuberculosis is such a grave one that there must be a centralization of the forces to fight it. From this centre must be controlled the campaign. Though the disease does not come like an earthquake, destroying a hundred thousand in one day and then sweep on away, it is an eternal shock to individuals in society and within our own national bounds kills five hundred and fifty-eight people every day from sun to sun. In North Carolina, though no accurate record is kept, you know and I know, that we bear our proportional part of these deaths.

As physicians and as citizens we, who are gathered here today in the interest of humanity, should exert every energy and put forth every effort to combat a condition like this. We are not only endangered ourselves, but our families are endangered, and some of us have already suffered.

Let me make this plea to you today, that we adopt the most forceful and economical means of fighting this plague, and in the words of Tennyson be "strong in will to strive, to seek, to find and not to yield."

Discussion:

By Dr. Minor: Gentlemen: There have been so many interesting subjects brought up that there is some excuse for a man getting up so often. I am delighted that Dr. Mann has written such a good paper. I think this dispensary work in the prevention of tuberculosis is one of the most important. This dispensary is one of the many links in the chain. If any of you have read the report of Dr. Locke, of Boston, you will learn what a large part the dispensary plays. Dr. Pratt's excellent method of teaching has been referred to. The poor people meet him once a week with their record books and he instructs them, and takes the greatest interest in them. They begin to learn how to care for themselves, and they go home and see that things there are better, that the homes are kept clean, and the nurse goes round and sees that they carry out the instructions that have been given them.

We all realize that the negro is a much more difficult problem than the poor whites. We all know how ignorant he is, how they close their houses so tight that no air can come in, how he sleeps in a tight room, but I don't think we should allow ourselves to be discouraged. Now, as to Dr. Pratt's methods. This cannot be successfully followed by a man who is not influential with his patients, with those with whom he works. I have seen this method used in Boston. I used it in my own private practice. I would not believe for one minute that this situation among the negroes could be taken care of like Dr. Pratt is taking care of it. I saw those people. I saw his books—Dr. Pratt's record books. I studied his method of dealing with these people and instructing them day by day. Many of those people returned to their work, well and happy. They are devoted to Dr. Pratt. They have profited by his teachings, and they go back to their homes and teach other people. We must teach the people. It must be done. Therein lies success in our effort to prevent this disease.

By Rev. R. L. Patterson, of Lutheran Church, Charlotte, N. C.: Gentlemen: In the morning I understood that laymen were asked to speak. I am a native of North Carolina and live in this State now. I lived here until I was 21 years of age, and then went North for my education in the ministry, and have since been in the ministry in the Lutheran Church. A month ago I returned to my State and to Charlotte. I

returned to my State, more interested than ever before in her welfare. I came back with a desire to contribute all I could toward her moral, intellectual and physical welfare. I am glad to see the splendid spirit which actuates the medical men of my State. I am glad of the progress that my people have made during the years I have been away. I am glad of the unselfish spirit which actuates the medical men of this State. I am indirectly related to this concern, Dr. Stevens, of your association, is my brother-in-law. I am especially interested, as he himself, as you know, had a fight with this disease. I wanted to speak because I thought I might possibly throw some light on it, by speaking of how the disease is treated in the State of Pennsylvania. That State has established a State dispensary system, for the care of tubercular people, who are unable to go to a sanitarium, and other places for treatment. They have a system of dispensaries, by which each county has a physician who is at the head of the dispensary for that county. He gets in communication with all the doctors, teachers, and ministers in that county. He sends letters regularly to the people who have tuberculosis and goes to see them. He offers free treatment to men who will come to him for treatment. He also furnishes free milk and eggs. I received frequent letters asking me to report cases of tuberculosis that came under my attention, and, I presume, others received letters of the same kind. In this way they sought to find out who had tuberculosis. As it happened, I lived in a community that was almost entirely free from tuberculosis. Very few cases came under my notice, and fortunately I did not have to report many cases.

This is the system they had in Pennsylvania of finding out the names of those infected with this disease. I do not know it is managed in this State, but it seems to me it would be a splendid thing to have such a system as this, and have a physician who was thoroughly familiar with the treatment of this disease in charge of the dispensary, and have physicians and ministers in each county find out who had tuberculosis in their respective territory, and bring them under the care of the dispensary.

By Dr. Mann, Durham: Mr. President: I went to the International Conference in Washington several weeks ago to study particularly this question of tuberculosis in the homes. It is here we must go for practical results. We can have our hospitals and our sanitoriums but the majority of patients must be treated at home, and unless we have some plan like a dispensary for treating these patients we put off the fight from

year to year, and consequently put off results. The dispensary must come. In a few years I believe we shall have them throughout our State. It is along this line we have been fighting in Durham, and although our fight for the establishment of the dispensary has been uphill we have at last succeeded in getting the promise of the necessary appropriations from the city and county authorities. We expect to have our dispensary doing useful work by March.

Personal Hygiene in the Prevention of Consumption.*

By Arthur R. Guerard, M. A., B. S., M. D., Flat Rock, N. C., Formerly Assistant Bacteriologist to the New York City Department of Health.

The control of tuberculosis is every day engaging the increased attention not alone of physicians and sanitarians, but of all thinking people throughout the world. Congresses, National and International, are being held to discuss the question and devise means for the prevention of the disease. Sanitary laws have been proposed and enacted by State and municipal authorities for the restriction of tuberculosis in man and animals. Special Hospitals, Sanatoria, Day and Night Camps, Dispensaries, etc., have been established for the isolation and treatment of consumptives. While everywhere associations, leagues and societies, medical and non-medical, have been formed, in the general crusade that is being waged against the "great white plague."

In the light of our present knowledge, of all diseases with which we have to deal, tuberculosis, though the most prevalent, is or should be the most easily preventable,—provided the necessary means to this end be taken. And yet, after all that has been said and done in the last twenty-five years, since the discovery of its cause and nature, what progress has been made in eradicating consumption?

Undoubtedly something has been accomplished,—in a number of localities, where active measures have been instituted to check its ravages, the dissemination of the disease has been prevented, and in some instances its mortality has been considerably decreased, as for example, in Germany, in England, in New York City* and other large cities in this country. But are we ever to succeed in stamping it out of existence altogether or controlling it generally throughout the civilized world, as has been

*In New York City the mortality from consumption has been reduced 50 per cent. in 10 years, as the result of active sanitary measures.

*Presented before The North Carolina Association for the Prevention of Tuberculosis, Charlotte, N. C., January 12th, 1909.

done with some other prevalent and deadly diseases, which once decimated the earth, such as small-pox and diphtheria, Asiatic cholera and the bubonic plague?

The pessimists tell us that it is impossible; the fatalists exclaim that consumption is an inevitable decree of Fate, a dispensation of Providence; while the skeptics say that to think of eradicating such a widespread and fatal affection is the idle dream of sanitary enthusiasts, far-fetched and utopian. And, indeed, at times the task would really seem to be almost hopeless,—especially when we read the weekly, monthly and annual reports of morbidity and mortality statistics and see tuberculosis still heading the lists,—flauntingly victorious, despite all our vigorous warfare to the contrary. We are then verily tempted for a moment to give up the fight in despair, and, sinking on the ground overpowered, to leave it to nature and the survival of the fittest,—“the weary to sleep, and the wounded to die.”

But this feeling of exhaustion and despair is only momentary. With renewed energy and courage we soon rise again to the combat, determined never to abandon the field, in the firm belief and conviction that we must triumph in the end. For this is not only a good cause, but it is a fight for life, a struggle for existence, against the most murderous foe, the most ruinous affliction, that has ever attacked the human race, and unless we can stem the tide of its mighty invasion it may entirely overwhelm us.

And truly may tuberculosis be termed murderous and ruinous. According to the recent statements of trustworthy authorities, this disease slays every year, and year after year, from 140,000 to 150,000, at least, of the inhabitants in the United States alone. At this rate of mortality, of those now living in this country over 5,000,000 people will die of tuberculosis, unless something is done to prevent it. But consumption not only consumes the vital forces of the individual, disabling him for several years, perhaps, previous to death, and at the period of his greatest usefulness and productive capacity, but it destroys, for the most part, the material prosperity of the family of the person whom it attacks. The money cost of tuberculosis, therefore, including capitalized earning power lost by death,—not to speak of the sufferings of the individual and the sorrow of his relatives and friends, the money cost of tuberculosis to this country alone, has been estimated to exceed a billion dollars annually; two-fifths of which falls on others than the consumptive. (Irving Fisher, M. D.).

Extravagant as these figures may appear, they are based upon the most conservative estimates, and are not intended to be in the

least sensational. But were I to venture to give the actual number of persons who are thought to be now infected with some form of tuberculosis, and who may possibly fall victim to the disease,—and were I to attempt to estimate, as has been done, in money values, the loss which may accrue from these possible deaths, unless present conditions are changed, before the last living inhabitant of the United States passes away,—the amount thus measured would be represented by figures so stupendous and inconceivable that they might well be called sensational.

Such is the general apathy of the public, however, to commonplace matters of life and death, that a bare recital of mortality statistics makes no impression on people's minds. It takes the calculation in big figures of immense pecuniary loss from disease, like the narration in harrowing terms of appalling natural phenomena, to startle the public into real interest and appreciation. The awful cataclysm of nature, for instance, which has just burst upon Italy, and before which man stands aghast in helpless horror and dismay, has aroused and moved the world to universal acts of sympathy and generosity. And yet, dreadful as this calamity has been, the loss of life and property, estimated in mere figures, which has been caused by this and by all the earthquakes ever recorded in history, cannot be compared in magnitude with the continued losses that are being produced by tuberculosis, a single preventable disease,—only, in the absence of any violent shock to our senses, and because of the constant presence of the destroyer in our midst, we do not realize the damage that is done.

It is surely worth while, then, both from a humanitarian and economic standpoint, for us to concentrate all our forces, to conserve all our available resources, to avert forthwith this enormous mortality and pecuniary loss.

But what are our available resources? What forces or munitions of war, so to speak, have we, to enable us to cope successfully with this murderous and ruinous foe?

We have, alas, no new or original weapons at our disposal,—there are no “long-range artillery” or “rapid-firing guns” in our armory,—in the shape of vaccine or antitoxic serum, such as were and are still being used so advantageously in our battles against small-pox and diphtheria; and although the best scientific and technical skill of the world has been for years trying to invent some similar instruments of war-fare, some specific cure or preventive of consumption, none has yet been found, nor may any

ever be discovered, that is or will be generally effective.

We have entrenched ourselves here and there, it is true, behind certain well-planned bulwarks of defense, viz: legislative action and enforced sanitation,—compulsory notification and registration of infectious diseases, etc.,—by boards of health; we possess, also, some valuable strong-holds of protection, such as hospitals, sanatoria, and the like; but however essential the former are for the guardianship of the public weal, or however helpful the latter may be for the benefit of the favored few, who may rest secure within their walls, neither of these battlements alone or together can be expected to suffice, under existing conditions, to repel all the onslaughts of our ubiquitous and powerful enemy,—the ceaseless volleys that are constantly being fired at us by the countless hosts of experts and hidden sharpshooters, such as tuberculosis commands.

No, at present, unfortunately, our munitions of war are wholly inadequate, our "far-flung battle line" is too thinly scattered and poorly equipped to afford us even a safe retreat for the wounded. *But there are other resources which we can make available*, if we would but deign to employ them and allow ourselves to be persuaded that they are of use. And they are so simple and, as a rule, so easily obtainable;—so simple, in fact, that they are apt to escape our notice entirely, or are considered mere objects of ridicule and thus wasted as if of no importance whatever. Nevertheless, such as they are, these resources are mostly within the reach of every one of us, man, woman and child, and, being largely under our own control, are of the utmost value and importance.

The principal remedy, namely, for the prevention of this disease, as of many other evils to which mankind is subject, lies mainly in ourselves. It is no costly drug or panacea with high sounding name, no miraculous treatment warranted to cure without fail;—if it were, it would be eagerly swallowed by the gullible multitude! But its very simplicity and availability are the greatest obstacles to its use. It is nothing more than the plain, practical application of a natural physiological law,—health and self preservation, or *personal hygiene*.

And it is chiefly the neglect of the most ordinary precautions regarding our routine health, together with ignorance as to the nature of the disease,—which, notwithstanding our boasted twentieth century civilization and learning, is still almost universal,—that renders us vulnerable to consumption and serves as an agent for its further dissemination.

But neglect of simple hygienic precau-

tions so well known as these now are or should be, which prevent the growth and multiplication of germs and the spread of infectious diseases, is no longer excusable on the score of ignorance; it has become criminal negligence,—for which, however, the uneducated masses are not so much to blame as the guardians of the public health and welfare. These,—among whom may be included physicians, sanitarians, educators, ministers, legislators, and representatives of the people generally,—should see to it that this ignorance and neglect are speedily removed by better hygienic education of the public. There is a crying need for such education, believe me, and not alone among the masses. It is strange, but true, that the average member of the so-called educated classes thinks little and knows less about matters pertaining to health;—and that, unfortunately, even a considerable number of practicing physicians do not seem to realize sufficiently the value and necessity of public health work.

Not that physicians on the whole are indifferent or opposed to the maintenance of the public health,—although it has been sarcastically said that "no medical practitioners, whose livelihood depends upon sickness, are likely to exert themselves in exterminating it." For the history of sanitary science, which is indissolubly connected with that of medicine, clearly shows that this is a libel on the profession; the greatest achievements of hygiene or preventive medicine are the result almost entirely of the work, investigation, and discoveries of medical men, and no class or profession has done so much for the preservation and prolongation of human life as the medical profession.

But it is true, nevertheless, that the paramount importance of the public health and its maintenance is not sufficiently recognized by many persons who should know better. To quote the memorable words of Disraeli, England's great Prime-Minister, "The public health is the foundation on which repose the happiness of the people and the power of a country. The care of the public health is the first duty of a statesman."

Yet consider what has occurred right here in the South where, in spite of our excellent climatic and other advantages, the rate of mortality has been higher than in the country at large,—a death rate, too, caused mostly by distinctly preventable diseases, such as tuberculosis, malaria, typhoid fever, hookworm disease, and the like,—I say it is an indisputable fact, to which it is folly to shut our eyes, that this dangerous and inexcusable condition in the Southern States today, has been brought about by the wanton disregard of simple sanitary laws and

modern sanitary methods, due to ignorance and lack of education in hygiene among our people, white as well as black,—for which we, my brother physicians and fellow Southerners, are ourselves largely, directly or indirectly, responsible.

As proof of what can be and has been accomplished even under the most unfavorable circumstances, look still further South at the sanitary conditions in Havana and Panama, both once notoriously unhealthy places but now made comparatively free from disease by the systematic application of scientific sanitation. Can any one deny that at least equally good results are obtainable by similar appliances in this naturally healthy and God-favored land of ours?

Education, therefore, in practical hygiene must be encouraged and exacted by every means in our power; it is the one thing most needed at present; for this, after all, is and will continue to be for some time to come our main weapon against consumption and other preventable diseases,—education not only as to the nature of tuberculosis but also concerning the ordinary laws of health;—so that each and every one may intelligently assist and actively co-operate in the campaign against the common enemy,—a campaign based on knowledge and scientific principles.

Above all, it must be brought home to the people,—a fact which should be self-evident to the most careless observer, the most reckless prodigal of health,—that nothing can save a person from the possibility of taking consumption, this infectious communicable disease, who is not prepared to protect himself;—that, no matter what physicians, States or municipalities, may or will do, much must remain to a large extent ineffective, unless each individual apply to himself the information given by the proper observance of personal hygiene;—the well persons to safeguard themselves against the disease and the consumptives to improve their own condition and avoid infection of others.

This is the key-note of the situation. Thus only by setting up an ideal of sound health,—*mens sana in corpore sano*,—and teaching, securing and enforcing practical hygiene by personal effort combined with legislative action, by proclaiming a gospel of health throughout the land, not alone by public health officials, by specialists in and out of sanatoria, and by general practitioners of medicine, but also in the schools and colleges, in the social clubs and charitable organizations, from press and pulpit, and from such associations as this;—thus only by teaching and preaching, at all times and in all places, the common-sense doctrine of personal hygiene, may we ever hope to

eradicate a chronic infectious disease like consumption, which is more insidious in its attacks and more disastrous in its results on mankind,—causing more death, suffering, misery, poverty, and perhaps crime,—than war, pestilence, famine, flood, fire, or earthquake,—nay, than all the ills that flesh is heir to.

But this is an age of co-operation, combination, and alliances of all kinds. The whole world is awakening to a deeper sense of the true brotherhood of man. Witness how unanimously the hands of all nations have been extended to Italy in her affliction, and how warmly and synchronously the hearts of all citizens have beaten, at the invocation of the National Red Cross Society,—the happy inspiration of the Penny Christmas Stamp,—to help “stamp out the great white plague.”

Last year's campaign, according to the annual report of the National Association for the Study and Prevention of Tuberculosis, has been the most successful in the history of medicine. During the year upward of a million dollars were collected and spent, and more institutions and organizations were established, for the prevention and cure of consumption, than the total number of such institutions in existence prior to January 1, 1908. In addition to the work of the National Red Cross Society, the International Tuberculosis Exhibit held first at Washington, and then opened in various cities throughout the country, has been an important factor in impressing upon thousands the necessity of properly combating the disease,—as the result of which all classes of people are taking up the crusade, including labor unions, churches and laymen.

Why, then, should we not seize the opportunity, while hands are extended and hearts are warm and attention generally is aroused to the menace of tuberculosis, and permanently combine the vast and varied interests of doing good in this great work of hygienic education and practical sanitation, with the full belief and expectation that the day will come, and is not far distant, when this widespread and fatal affection, and all other preventable diseases, may be completely exterminated?

As an example of one method of popular hygienic education, such as has been found valuable in public health work, I have compiled a brief set of sanitary rules or axioms of health,—which may be modified, of course, to suit the occasion,—to be used as leaflets of information for general distribution, under the title of “Practical Health Rules for the Well and the Sick,—or, Facts that Everybody Ought to Know,—Regard-

ing Consumption,—Its Prevention and Cure.”

“Information about Consumption; What it is, and How it is Produced and Spread.”

Consumption is a wasting disease that may be taken from others. It is not caused by colds, as is commonly supposed, though a cold may make it easier to take the disease. *It is produced by a germ, that is by a very minute form of plant-life, visible only under the most powerful microscope, and called the tubercle bacillus.*” From the word *Tubercle* comes the other name for consumption or “tuberculosis.”

Tuberculosis may affect any part of the body, but the usual seat of the disease is the lungs. Tuberculosis of the lungs is the form of the disease commonly known as “consumption.”

The germ enters the lungs by the air breathed. The matter which consumptives cough or spit up contains these germs in great numbers,—millions are often discharged in a single day. This matter spit upon the floor, wall or elsewhere, dries and is apt to become powdered and then floats in the air as dust. The dust, full of germs, enters the lungs with the air breathed. A well person catches the disease from a consumptive only by in some way taking in the matter coughed up by the consumptive.

Practically, this is the chief danger of contracting consumption. But *there is another possible, and with children probable, way of taking it, and that is from food.* Cattle, and more particularly milk cows, are also very subject to tuberculosis, and when diseased they may communicate consumption to man *by means of the contaminated milk and meat.*

No age, sex or race is exempt from consumption, but all persons are not equally liable to take the disease. Some people are by nature apparently proof against tuberculosis, while others are very susceptible to it. Among those who are most apt to contract consumption are the children of consumptive parents and others born with delicate constitutions. But this liability to consumption is not necessarily inherited; it may be and often is acquired. Anything which tends to lower the vital powers or resistance of the individual,—such as poor food, ill ventilated and lighted dwellings, bad habits, unwholesome occupations, mental worry and depression of spirits, weakening diseases and ill health of any kind,—contribute to a condition or form a soil, as it were, favorable to the growth of tuberculosis germs and thus, through the poison which they develop, to the production of consumption.

Although the most common of all diseases, *consumption can be prevented by com-*

paratively simple and easy means.

Consumption can often be cured, if its nature be recognized early and if the proper measures be taken for its treatment. It is by no means always a fatal disease.

The principal way by which consumption can be prevented and often cured is largely under our own control, namely, by the personal observance of the ordinary laws of health.

* * * * *

I. Precautions to be observed by the well to protect themselves from consumption.

The Essentials of Health:—The preservation of mental and bodily health is the best safeguard against disease. Therefore, it is particularly important to maintain the highest possible standard of health to protect oneself from consumption, the most common and fatal of all diseases.

The essentials of health are *pure air, sunlight, good food, exercise and wholesome occupation.*

Pure Air:—Air is lung food. Impure air is as injurious to health as poisonous food. Most people have a very false idea of what constitutes pure air in the atmosphere we breathe. They think that unless they can detect offensive odors in the air it is fit for breathing. This is entirely wrong. We may live or sleep in a room where the air has not been sufficiently renewed to be healthy, and yet we can perceive no vitiation of the atmosphere whatever. But if we continue to inhale stale or re-breathed air for any length of time it becomes extremely poisonous, though its unwholesome effects are too insidious and imperceptible to attract our notice. Re-breathed air is particularly conducive to consumption.

The air of cities, and more especially of densely crowded districts, is apt to be bad. The purest air is that of the open country, among the mountains or in mid-ocean. But whether in the country or city the air of ill-ventilated dwellings must be impure. All living apartments, therefore, must be well ventilated by means of a current of fresh air through open windows, not only to let in pure air, but to blow four internal air out. Nurseries and bed-rooms occupied especially by delicate persons should have large windows and, if possible, a Southern or Southeastern exposure.

There is a common impression that night air is injurious, but on the contrary night air is often purer and healthier than day air, because it is apt to contain less dust. In sleeping rooms there should be always a window left partially open by night, winter and summer. A wire gauze or muslin screen may be placed in the window, if one objects to draughts, to obviate the difficulty.

A bed-room on the ground floor, if low to

the ground, is almost always unhealthy. In many of our large cities the ground is so built over that only the upper rooms are really fit for habitation, on account of the stagnation of the air, gloom and dampness. Damp, shut-in, old houses with stale papering remaining in layers on the walls, decayed wood-work and dark basements, are the very worst dwellings to live in. Not only should careful attention be paid to house drainage and plumbing, but all basements must be kept clean and well ventilated, and no rubbish be allowed to accumulate in cellars.

In order to insure good health each person should have sufficient breathing room in a dwelling. Over-crowding is very injurious, and nothing contributes more than this to the prevalence of consumption in our thickly populated cities. There should be at least 1000 cubic feet of air space per person to the room, or a space measuring 10x10x10 feet, or in that proportion, for each individual, to live healthily.

Finally, in breathing we should learn to inhale air habitually through the nose and not by the mouth. The nose acts as a filter for the inspired air, and thus much impurity of the atmosphere, disease germs, and the like, which would otherwise enter the throat and lungs, are arrested and expelled in the nasal secretions. It is particularly important that children be taught this habit.

Sunlight.—Light is as necessary to health as air. Light, and especially direct sunlight, is one of the best germ-killers known, and therefore a great protection against consumption.

A dwelling upon which the sun never shines cannot be healthy, and those who inhabit dark, damp apartments soon become pale and sickly, like plants that are kept in a cellar.

Not only living rooms and dwellings, but churches, schools, lecture halls, courts of justice, and all places where many people congregate, must have plenty of light as well as good ventilation, in order to be healthy.

Good Food.—Everybody recognizes the need of food, but all food is not good or wholesome. Many things are eaten as food which only fill up the stomach and give no nourishment whatever.

The body in a sense is a machine. Like other machines it requires material to build up its several parts and keep them in repair, and to serve as fuel. This fuel, which like the coal of the engine is converted into power, is furnished by the starchy foods,—bread, oat-meal, rice and other grains; peas, beans, potatoes, etc.;—also butter and other fats. The fleshy foods, such as beef, mutton, pork, poultry, fish and eggs and milk,

afford the material to build up the body and replenish its waste.

The essentials, then, of a nourishing diet are bread and meat. But neither one of these articles of diet alone would constitute sufficient food for health. They must be eaten in combination and of the proper quantity and quality.

Milk comes nearest to being a perfect food of any single article of diet, as it contains all the necessary nutritive elements in the right proportion; and it is on this account the best food for children and sick people. But it also contains so much water that a healthy man or woman could not well live on it for any length of time, because they would require to consume too much milk to get the necessary amount of nourishment.

Food must also be eaten in moderation. Over-eating is as injurious to health as over-drinking. It is often said that "enough is as good as a feast," but enough is better than a "feast," if a "feast" means more than enough. Food, moreover, must be well chewed and eaten slowly to make it assimilable and nutritious.

The plainer and simpler the food, the more wholesome it is, provided it be well cooked. Cooking renders the food digestible and palatable and destroys any injurious quality it may possess. Meat should never be eaten raw, as it may contain disease germs, which cooking ordinarily destroys. Spices and condiments detract from the value of food, and are unnecessary if it be properly cooked; besides, they produce an artificial appetite, which causes one to eat too much.

Fresh vegetables and ripe fruits, on account of the salts and acids they contain, are wholesome and assist in maintaining the purity of the blood. Sweets, pastries, cakes, biscuits, buns, candies, and the like, on the other hand, are very unwholesome when eaten, as they often are, especially by young persons, to the exclusion of more nutritious foods. They impair the appetite for regular meals, and consequently, those who are in the habit of eating large quantities of such things get improperly nourished and fall into a debilitated condition which tends to the production of consumption.

Pure, fresh water is the best drink. If contamination of drinking water be suspected, however, as in epidemics of typhoid fever, it must be boiled before use. Tea and coffee taken in moderation, that is one or two cups a day, are not harmful, nor are beer, ale or wine, when drunk in small quantities toward or at the end of a meal. Spirits, unless well diluted, are always injurious. In fact, as alcohol, if a food at all, is in health an unnecessary food, and is so

liable to be abused, it should never be taken in any form, except under medical advice.

Cows' milk, since tuberculosis is so common among cattle, should, as a rule, be cooked when used as food. The milk obtained in cities should, invariably, be sterilized by heat a short time previous to use. It is not enough to sterilize milk and then put it away uncovered in the pantry or refrigerator a long time before using, as it may in this way become contaminated by dust or insects. Many other diseases besides consumption, it should be remembered, may be conveyed by milk, such as typhoid and scarlet fever, diphtheria, diarrhoea, etc.

If milk can be obtained in the country direct from a healthy cow, known to be free from tuberculosis, the nutritive value as well as the flavor of fresh, unstored milk will be found superior to any boiled or preserved milk. Milk as it comes from a healthy cow, obtained under sanitary conditions, is pure; the contamination, if any, gets in later and only from carelessness and neglect. But unless one is sure of the milk being pure and free from germs, it is safer always to boil it. Simply bringing the milk to the boiling point for a minute destroys all the common disease germs.

The greatest possible care should be observed in the storage of food to keep it clean. This precaution, especially with regard to milk, cream, butter, cheese, cold meats, jellies, etc., is often neglected. These articles of food may easily become contaminated by germ-infected dust after cooking, and thus form a means for the transmission of disease. It should also be borne in mind that flies and other insects, and vermin, may carry disease-germs from the secretions and discharges of sick persons to the food. This is a much more frequent cause of disease than is commonly supposed.

Cleanliness.—Cleanliness is to the body what oil is to the machine: it preserves from rust. The best kept machines last longest. It need not be proven that uncleanness, invariably, must breed disease.

There is nothing like bathing, and particularly a cold bath every morning on rising, for bodily cleanliness and health. Cold bathing is a habit that should be gradually acquired, if the patient is very sensitive at first. It is a most valuable safeguard against consumption.

Clothing.—This should be sufficiently warm but loose, so as to afford absolute freedom of motion and respiration. It should be porous and light, but of a texture that will ward off all abrupt changes of temperature. Heavy, close-fitting garments, tight corsets, low-necked dresses and thick veils are injurious. Children should be comfortably and warmly clad,

but not coddled and kept too much indoors from an inordinate fear of catching cold. They should be taught the habit of cold bathing which will do more to render the system unsusceptible to cold than any quantity of cloaks and confinement in the house.

Household Pets.—Household pets, birds and other domestic animals are also sometimes subject to tuberculosis as well as cattle. Guinea-pigs and rabbits are highly susceptible to the disease, cats and dogs less so. Fowls, pigeons, doves, canaries, parrots, and all cage birds, are liable to contract a species of tuberculosis. Rats and mice are also occasionally tuberculous.

It is well, therefore, from a sanitary point of view, not to have many animal house pets, particularly tame rabbits and guinea-pigs. Bird and fowl houses adjoining a dwelling are also unwholesome. Indeed a household is safer, as regards health, without any pet animals except perhaps the dog and the cat, which should then be properly fed and cared for, and sent at once to the veterinary surgeon as soon as there is a suspicion of disease. A house should, if possible, be kept free from rats and mice and other vermin, as they may carry infection to food.

Occupation.—Persons with a tendency to weak lungs, or those born of consumptive parents, should be careful in the selection of an occupation. They should especially avoid engaging in any business which necessitates them working in an impure and dusty atmosphere, such as that of knife-grinder, stone-cutter, plasterer, potter, hat-maker, tailor, wool-carder, weaver, cigar-maker, baker, miller, type-setter, and the like.

They should seek, if possible, an outdoor rather than an indoor occupation, and lead an active life in the open air. If compelled to live indoors, they should take every opportunity to go into the open air for systematic daily exercise.

Habits.—Excesses and dissipations of all kinds are injurious to health; drunkenness, especially, is conducive to consumption. Not only does this disease take many of its victims from the ranks of habitual drunkards, but the descendants of drunkards are particularly susceptible to consumption.

Sores, Boils, Etc.—Sores, boils, carbuncles, skin eruptions, decayed teeth, enlarged glands, blocked nasal passages, and the like, if present especially in the young, should receive careful attention by a physician or specialist; they may be tubercular or the means of tubercular infection.

Exercise and Surroundings.—Monotonous and depressing surroundings are powerful factors in the production of consumption.

The value of amusements and recreations, and more particularly the importance of out-door games and exercises, cannot be over-estimated.

Living with Consumptives.—It is better not to sleep in the room with a consumptive and certainly not in the same bed; but it is not because he is dangerous simply by contact or proximity or from any poisonous quality of his breath: We may live with a consumptive, talk to him for hours and attend him constantly, without running any serious risk,—provided we take certain precautions, the chief of which is to see that the matter which he coughs up is kept moist, or collected before it becomes dry and destroyed by burning or throwing it into the water-closet, so that it may not be converted into dust.

Rooms Previously Used by Consumptives.—No one should occupy a room or dwelling previously inhabited by a consumptive, unless it has been thoroughly purified and disinfected. In cities where the notification of all cases of consumption is required to be made to the Board of Health, this disinfection is attended to by the health officers, usually free of charge, and the owner compelled to make the necessary renovations to insure perfect purification of the premises.

The disinfection should consist of fumigation of the apartments after all cracks and crevices, fire-places, doors, windows, and the like, have been tightly closed and sealed,—with sulphur or formaldehyde gas: then the windows left open, the floors scrubbed with hot water and carbolic soap, the walls and ceilings re-colored or re-papered and the wood-work washed and re-painted or varnished. The furniture, bed and bedding, carpets, curtains, etc., should have been disinfected by steam or formaldehyde gas, or at least exposed for several days to the sun, before being used by any one else.

It is well, as a safe-guard to health, to enquire as to the former occupants of an apartment before moving into it, whether any cases of consumption have occurred there and, if so, whether it has been properly disinfected.

Traveling with Consumptives.—No one should travel on board ship or in a Pullman car in the same cabin or compartment with a consumptive. If by chance any one should find himself after starting on a journey in the same compartment with a consumptive companion or one whom he has reason to suspect of consumption, he should make application at once for another berth or have the sick person removed. Steamship and railway companies taking consumptives on long trips should be made to provide special accommodations for them.

Domestics and Nurses.—No one should

employ consumptive domestics,—cooks, maids, laundry-women, etc. We cannot be too careful in this regard in selecting nurses especially for our children. If one is in doubt about the health of a servant or applicant for domestic service, the family physician should be consulted.

Wives Nursing Consumptive Husbands.—Consumption is so liable to be transmitted from the sick husband to the healthy wife who nurses him, that she who has this duty to perform should do all in her power to maintain the standard of her own health; she should allow herself ample rest, nutrition, and recreation, and should go as much as possible into the open air.

* * * * *

II. Precautions to be Observed by Consumptives to Improve their own Condition and to Avoid Giving the Disease to Others.

Pure Air and Sun-light.—Pure air and sun-light being the first essentials for health, they are all the more necessary for a person afflicted with diseased lungs. Consumptives, therefore, should pursue as far as possible a life in the open air, preferably in the country.

Dry cold is not injurious to consumptives; on the contrary, consumptives often improve more in winter than in summer; but high winds and dampness combined with sudden changes of temperature are harmful to and should be avoided, if possible, by them.

If a consumptive can choose his place of abode, it should be on a soil consisting of sand and gravel with good natural drainage, or at least well drained artificially by pipes. The altitude should be moderate, though some consumptives, as those with weak hearts, do better at the sea-shore, while others with a more vigorous circulation find the mountains more beneficial. The exposure of the dwelling should be bright and sunny, and protected from high winds. Here the consumptive, his condition and the weather permitting, should pass most of his time out of doors in a tent or summer-house, or lying in a hammock,—taking sufficient exercise but not over-exerting himself.

Nourishing Diet.—Nourishing diet is no less important than fresh air in the open. Consumptives are apt to have poor digestions and cannot assimilate what they eat. The food which they take should, therefore, be of the simplest variety and properly prepared, so that it may be easily digested and readily assimilated.

Milk is the best single article of diet for consumptives, next eggs, and then well cooked meat and bread. It is sometimes necessary to artificially predigest the food of consumptives by the addition of certain

medicinal substances (muriatic acid, or diastase, etc.) which effect this purpose, but this should be done under medical direction, of course. What agrees with one person, however, may disagree with another. The best guide as to the proper amount and kind of food to be taken by the individual is found in his weight. A gain in weight indicates that the food is of the right quality and quantity, and is being properly assimilated.

Clothing of Consumptives.—The clothing of consumptives who are able to be about should be warm but loose and comfortable, and to avoid all sudden changes of temperature woollen garments must always, both in summer and winter, be worn next to the skin.

Occupation for Consumptives.—Consumptives, if engaged in sedentary indoor occupations, especially in a dusty atmosphere, should seek some other employment. If the individual's means and station in life admit of an extended holiday, he may, on the advice of his physician, go to some mountain health resort, to the sea-shore, or take a long sea-voyage; but he will probably derive more benefit from systematic treatment in a well equipped sanatorium for consumptives. If he is unable to get out-door employment, and is too poor to travel or pay for treatment, he should at least stop work until he has regained his health and, if necessary, appeal to the community for aid, through some charitable society or public institution.

After recovery, a consumptive should continue to lead a temperate, steady life, avoiding late hours, crowded assemblies, close rooms, irregular meals, over-fatigue and excesses of all kinds. If an out-door occupation can be selected, so much the better, but he must have something to do and live as much as possible in the open air. If unemployed he should pursue a hobby if only to occupy his mind.

Secretions and Discharges of Consumptives.—The secretions and discharges of consumptives require the most careful attention and scrupulous cleanliness, both on the part of the sick persons and those who live with them; for it is by neglect of this precaution that the disease is chiefly spread.

The matter coughed up and the discharges from sores, abscesses, and the like, must not be allowed to soil the clothing, bedding, carpets, mats, floors, walls, or any part of the dwelling. A spit-cup or cuspidor, provided exclusively for the purpose and containing water or some fluid disinfectant like carbolic acid, must be used for consumptives to spit in.

The consumptive should remember that, besides the danger of giving the disease to

others, if he is negligent in this respect, he may re-infect himself not only by taking in the contaminated dust with the air breathed, but by swallowing the germs in solid particles of matter clinging to soiled handkerchiefs, towels, bedding, clothing, etc., or to his own beard and mustache.

At the same time, inasmuch as constant and indiscriminate spitting is a disgusting habit as well as injurious to others, a consumptive, even if out of doors, should spit as seldom and as circumspectly as possible. If obliged to spit on the street, he should at least use the roadway or gutter, where the light may kill the germs, and not the pavement, where the skirts of ladies may sweep up the dust and carry the poison to their homes.

Spittoons containing water should be placed conveniently in all public places, hotels, halls, clubs, theatres, offices, schools, work-shops, stores, cars, steam-boats, etc., and notices hung up forbidding persons to spit carelessly on the floors or walls. Spitting on the pavements of streets should also be prohibited: And these anti-spitting laws should be made a part of the sanitary code in all towns and cities, the infringement of which should be punishable by fine, like any other nuisance and menace to the public health.

The contents of all spittoons must be emptied into the water-closet, and the vessels carefully cleaned by washing in boiling water or with some fluid disinfectant like carbolic acid (5 per cent. solution).

Provisions for Spitting on Leaving Home.—Consumptives on going from home should provide themselves, in case of emergency, with cheap cloths, —squares of cheap cotton material, Japanese paper handkerchiefs, and the like,—to receive the matter coughed up; and these must be destroyed by burning before the matter dries, and not sent to the wash or thrown into the waste-paper basket. Pocket spit-cups or flasks, of various designs and containing some cheap absorbent material, which can be taken out and destroyed after using, have recently been devised for consumptives, but they are somewhat objectionable on account of being so conspicuous. Ordinary pocket handkerchiefs, however, should never be employed for the purpose, as they are not burned after use, as a rule. But these and all other bed and body linen used by consumptives, which may have become contaminated by the secretions or discharges, must be scalded in boiling water before being sent to the laundry.

Table Utensils.—Consumptives should be provided with separate sets of knives, forks, spoons, etc., but in default of these precautions, all table utensils used by them should

be separately and carefully cleaned.

Individual Communion-Cups, Etc.—Owing to the known communicability of consumption and other germ diseases, it has recently been proposed to provide individual communion-cups for use in the ceremony of the Holy Sacrament. For the same reason general drinking-cups in trains and other public places should not be used in common.

Wind and Other Instruments.—All wind and other small instruments, which have been used by consumptives, if no longer needed by them, had better be destroyed. They should at least be thoroughly cleaned and disinfected before being used by others. The same precaution as to cleaning should be taken with regard to telephones.

Living and Sleeping Rooms of Consumptives.—The living and sleeping rooms of consumptives should not be kept too warm, and above all they should be well ventilated by means of large windows left partially open by day and by night.

No dust must be allowed to accumulate on the floor, walls or furniture; but the ordinary process called "dusting" should be substituted by a method of moist cleaning, that is removing the dust with a damp cloth, without stirring the air. The so-called "dusting" in common use only blows the dust from one place to another, and does more than good.

Stuff-curtains, carpets, draperies, heavily-upholstered furniture, and everything which might collect and retain dust, should be banished from rooms occupied by consumptives. Stained or painted floors which can be repeatedly mopped with a wet cloth,—not waxed floors,—and rugs, instead of carpets fastened to the floor, are infinitely the cleanest and healthiest for domestic use under any circumstances, and especially advisable for consumptives. If carpets are used at all they should be cleaned with damp tea-leaves or salt, or by the patent vacuum process, and not swept. All "sweepings" must be burnt, not thrown in with the trash.

A room which has been vacated by a consumptive must be thoroughly disinfected, cleaned and renovated, before any one else is allowed to occupy it. The same purification is necessary with regard to bedding, furniture, and the like, before use by others.

Consumptive persons should occupy separate rooms or at least always separate beds.

Consumptive Mothers.—Consumptive mothers must not suckle their infants. Kissing may also be the means of communicating the disease to others.

Marriage of Consumptives.—Consumptives

suffering from progressive disease ought not to marry. When all symptoms of disease have disappeared, and when the general health is good, marriage, in the case of men, may be entered into after the lapse of two or three years without any great risk. But women incur far greater danger in marrying than men, in connection with pregnancy and child-birth; for under the influence of such conditions, quiescent or arrested consumption may become active, or, in other words, the disease may be seriously aggravated. If, however, the germs of tuberculosis continue to be found in the matter coughed up, marriage should not be entered into by either men or women.

Treatment and Cure.—Last, but not least, on the slightest suspicion of threatened consumption by the person himself or his friends, he should at once consult a competent physician and be thoroughly examined; for the sooner the disease is recognized the better is the chance of cure. This is a most important precaution.

The cure of consumption is effected chiefly by the observance of personal hygiene, by the minute and careful attention to the simplest laws of health, not by the use of drugs and specifics. Its permanent success depends, of course, upon the skillful treatment and advice of the physician in charge of the case, but above all upon the attitude of the individual himself. In order to submit cheerfully to the unusual sacrifices, and to carry out conscientiously the details, which the treatment demands, the consumptive must have an abiding faith in the efficacy of the measures prescribed and an unflinching hope of his ultimate recovery.

Discussion of Dr. Guerard's Paper.

Dr. Armfield: We want to know the cause of tuberculosis. No one has said anything about the origin of tuberculosis. I have been practicing medicine for twenty years and I have never given a dose of medicine where I did not know what was the matter.

By Dr. Minor: I think the doctor who has just spoken is mistaken in saying that no one has said anything about the origin of tuberculosis. I think if he will ask the President and several others here, he will find that there has been a great deal said about that very thing. The doctors here, I think, are very well informed on this subject, and have had excellent papers and made excellent talks on it. The man who has just gone out, is, I daresay, the only man here who regrets that this phase of the question has not been discussed.

Education with Reference to Tuberculosis.

By John Roy Williams, M. D., Greensboro, N. C.

The control of tuberculosis depends upon the education of our people. We must give the information necessary to teach the nature of the disease, the ways of contracting and preventing it, and the recognition of it in its early stage, before we can ever hope to obtain the needed co-operation with which to bring about a control. The medical profession has been slow attempting this, but we should lose no more time in putting it into effect.

Such a movement must be backed by authority. We must look to the State authorities for it. We can stimulate the State authorities to inaugurate the movement. We must do it directly and indirectly. Personal letters to the Governor by all or a large part of the physicians, and by the medical societies of the State, suggests to me the direct method. The indirect method must needs be by creating a public sentiment for it. Mr. Kitchin is a sensible man, and has the good of his people at heart; and he would gladly welcome suggestions from the physicians which would offer a solution of the question of public health. He has the Legislature with him, and it will do his bidding I believe.

In the shape of education, what could we want the State to do? To bear at least a portion of the expense. North Carolina could not better spend a small portion of its money. It could be brought about if properly gone about. As the object of this Association is the control of tuberculosis, let us start the movement here.

Recommendations.

I advocate, that we request the State to furnish sufficient funds to provide literature for circulation among the people, in which will be incorporated the instructions which the people need. This literature should be widely distributed, sent into all homes, and be so written as to be easily intelligible. The Bulletin, sent out by the Board of Health, while good in its way, is lacking to a degree. It does not reach enough of our people, is attempting to cover too much ground, and is not laying enough stress on any one condition. It is not in an attractive form, is not properly read and studied, and is failing to accomplish its aim.

I advocate the publication of a book, of forty or fifty pages, covering in brief, the subject of tuberculosis, compiled so as to be easily intelligible to the most ignorant reader. Let it be attractively gotten up, so as to be worthy of a place in the library of our people. Put it in a permanent form. Let it contain such matter as to make it suitable for a text in all of our schools. It

should contain a simple definition of tuberculosis, the ways of contracting and preventing it, how to recognize it early and what to do when it is found. The duties of the consumptive to the public and himself, should be plainly laid down in it, as should the duties of the well toward the consumptive and the public.

The State should provide the necessary funds for the publication of such a book, and for the distribution of it. It should provide for supplementing the book with illustrated lectures, the different points of information contained in this book, could be forcibly and intelligently fastened in the minds of the people, and the good which would accrue from such a course would be immeasurable. If lectures could be simultaneously delivered all over the State, it would give birth to a public sentiment for the control of tuberculosis, and would sweep with an irresistible wave towards bringing about needed legislation.

This book should be placed in the schools; and teachers, who have been trained for the purpose, should be selected to interpret it to the children. The child has an impressionable brain, and this needed instruction would be sown in a fertile soil, to bring forth, in a few years, an abundant harvest of good for the control of this disease.

Should Distribute Literature.

Literature on tuberculosis should be compiled by the physicians of the State, sent to the State Board of Health, and be published in the daily press as coming from the Board of Health. It should be published in all the daily papers, magazines and journals, so that it will reach all readers. There are many physicians in North Carolina who would gladly devote sufficient time to compiling such literature.

Every county in the State should take up this campaign of education. They should issue a pamphlet, containing information of a character similar to that found in this proposed book. This pamphlet should be in the nature of a digest of the book. It should be uniform, that is, the same pamphlet should be circulated in every county, each county defraying the expenses for circulation among its people. Let the book be compiled under the direction of the North Carolina Association for the Prevention of Tuberculosis, also the pamphlet. Submit both to the North Carolina Medical Society for endorsement, and both book and pamphlet will have an authority behind it, as to demand their adoption by the State of North Carolina.

Once the people shall have been given this information, there will no longer be an excuse for ignorance. The excuse for ig-

norance having been removed, there will no longer be an excuse for not doing the things necessary for the proper control of tuberculosis. Then it would be feasible, right and proper to enact laws requiring that every man, woman and child in North Carolina shall observe certain rules of hygiene and sanitation. We can not do that now, as the masses are not supposed to know these rules so as to observe them, but once the excuse for ignorance has been eliminated, such laws could and would be enacted.

The board of health of Greensboro has started a campaign for the control of tuberculosis. It has published instructions in the daily papers, and is now circulating these instructions in pamphlet form, and purposes to put that pamphlet in every home in the city. That it will create some public sentiment to back up any effort to control tuberculosis in Greensboro, there is no doubt in my mind.

Every town in North Carolina should have a dispensary for its tubercular cases. At these dispensaries, an abundance of instructions could be given directly to those suffering from the disease. They would, without doubt, be well patronized, and a great good would soon follow their establishment. Classes would be formed from the patients, lectures be delivered to them by the physician in charge, and these people, being sufferers from the disease, would take these teaching deep to heart, become missionaries among their friends and prove a benefit in their community. If we can but create a little public sentiment towards such an object, we will soon have dispensaries all over North Carolina.

Discussion.

By Dr. Minor: I hate to get to my feet every time a paper is read. I thoroughly believe that we should have before us a plan of campaign—a definite purpose to follow. I have some ideas which I will suggest tonight. I think the suggestions of Dr. Williams most excellent. I think we have already found out the greatest difficulty involved in this, and with what great care these pamphlets should be written. But they can do a great deal of good. So far as our school books are concerned, that has been taken care of in physiology. I am not prepared to say whether it is wise to go at once to our Legislature about this matter. Dr. Lewis spoke some very wise words. While I know there are some good men there, yet there are a great many in the Legislature who are only politicians, and everything they do is for the purpose of getting votes. While I do not believe that we should go out every time and ask

somebody else to help us, I must confess I think we should feel that the Legislature is a part of ourselves, and I think we are doing our duty when we ask them to help us, and that we have a right to advocate the cause of the sick and suffering in this State. I recognize the fact that they give thousands of dollars to the Agricultural Department, because the farmers bring them votes. For the schemes that I shall suggest tonight, and for other things, we shall need probably more money than our own dues and the people in the State can give us. I think Dr. Williams' suggestion of first getting the cooperation of our Governor, who is an intelligent man, and getting him on our side, and get some politicians interested, is an excellent one. We might thereby later on work up the right kind of feeling. It is unnecessary to discuss whether they owe it to us; they owe it to the State. If they owe it to the insane to establish a hospital for their care in the State, ye gods, don't they owe it a great deal more to the people in the State suffering with this disease?

I do believe that a committee of this Association ought to seriously consider the suggestions contained in Dr. Williams' paper, and that action will eventually come out of it. Unless there is some action taken, our time is wasted. I heard a man say once that Christianity meant "doing something". Philanthropy means doing something. We want to be careful what we do. We don't want to get into any tangle, but, if we don't do anything, then, gentlemen, let us go out of business.

By Dr. Lewis: I merely want to correct the insinuation that I am a politician.

By Dr. Minor: Let me say that there are politicians and politicians; and let me say also, that if there were more politicians in the Legislature like Dr. Lewis, we would get the desired results.

By Dr. McAnally, of High Point: I just want to say that it is along this line we should be thinking. I am glad to hear what has been said along this line. I hope some action will be taken.

By Dr. Lewis: This is, of course, a very difficult and tremendous problem. I do not however, at this time think it practical to take this matter to the Legislature. I don't think that is due to the fact that the Legislature is made up of "demagogues". If you prove to the Legislature that your proposition is good, a sensible one, then they are very apt to do something for you. What I am going to say and suggest is that we have a very able and progressive Superintendent of Public Instruction, who is very much interested in the Public Health problem. He will cooperate in every possible

way to educate the children of the State along this line. Now if some of you learned doctors will write a well prepared and proper and suitable book, that can be used as a text book by children in schools, one that will carry out the ideas that have been suggested here; if you can prepare a proper book and present it to the public schools and show that it is valuable for the instruction of the children of the State, they will probably accept it, if it is the right kind of book. We can not only then educate the children, but the one who writes the book, will make good money out of it. You see, if you write the book, the children of North Carolina will all have to buy it, and it means a mighty good thing to the man who writes the book.

So, gentlemen, stir up your brains and write that book.

By Dr. Faison: This question of educating the people, I will not say is not a good thing. I have been hearing that kind of talk in this State by the medical profession a long time. I don't deny the fact that it is doing some good, but I am persuaded to believe that if that is the only measure you gentlemen are going to suggest that it is going to be a long time before you do much, and a great many people will go dead while you are doing that. Education is all right. Everybody, from six years old up, including the doctors, ought to be educated, and the sooner you get them educated, the better. North Carolina people are slow to act and North Carolina people are not going to read everything you give them. It takes law in North Carolina, as well as in other places, to do things. I have it in my mind that it is going to take some law in North Carolina to stop tuberculosis. You can talk and pray about tuberculosis, but that won't stop it. It will help, but put the law with it. You have got to do it. Going to the Legislature don't cost anything. I do not say ask them for money. I know there are plenty of fools in North Carolina, all over it—in the Legislature and out of it, but I know that unless you tell a man he has got to do something, he will not do it unless he wants to. North Carolina people are like most people,—they are too conservative. Whiskey has got nothing to do with tuberculosis, except to produce it. I am in favor of wiping it out. I am in favor of destroying every drop of whiskey in the United States, as a beverage. You may write your pretty little books and send them around. They will do some good. You may make one man in a thousand read them, but 999 won't read a word in them. If you find a man building a house and go to him and tell him he is doing the work all wrong, to tear it down, he will pay no attention to

you, but you go to him and tell him that the law requires him to tear that house down and build it right, and he will stop and do as you say. That is the way you have to do, gentlemen. I don't believe in going down to Raleigh and sliding in on your stomachs to the Legislature and begging them to do something. I believe in asking them to do things, and, if they won't do it, put men there who will do it. I say the medical profession in North Carolina can get anything they want. The trouble is, the medical men are not together. I admit education is all right. I am an advocate of all kinds of good education. I am an advocate of sending men down to Raleigh, too, who have sense enough to write law, that will require the people to carry out the law. You want them to be educated up to it. When you do that, you are doing something. I like to see those things done. I hope they will be done, but, if you are going to rely on the education side of it, I expect to be dead and forgotten before anything is done about that. That is my view about it, gentlemen. You can think as you please.

By Dr. Weaver: A prominent physician has said that only 2% of the tuberculosis is treated in sanitariums, and if that is so, 98 per cent. of it is in the hands of the common practitioner, and, therefore, he is the man behind the gun in this great combat before us, and if the common practitioner is to be the man behind the guns in this great warfare, it seems to me that the early diagnosis of the case is the milk in the cocoanut. If there is a case of tuberculosis in a community, the doctor who makes the diagnosis should bring it to the notice of the authorities, and means should be sought for the prevention of the disease and for prevention of its spreading. Education and the law must go hand in hand. We should have strict ordinances, municipal, State and county, for the destruction of the main cause. Take care of the sputum, and the disease, to a great extent, as far as the law is concerned, will take care of itself, and we can't do that until we control the ignorance and prejudice of the people and you can't control the ignorance of the people except by law. How are you going to get that law. As they say, some one should go before the Legislature, which is a reasonable one, and they should present these facts to these men, and show them the necessity of it, and they will enact conservative laws, by which this great plague can be controlled from year to year, and we will go on with the camps and hospitals, sending all the indigent poor there, that can be taken care of, and at the same time, let the common practitioners all over

the county be the leaders in instructing the common people and families how to do, and one by one they will fall into this role, and the consequence will be in ten years tuberculosis in North Carolina, which is now $12\frac{1}{2}\%$ —even more in the States of Pennsylvania and New York. will be reduced to 8 per cent. or 10 per cent.

By Dr. Minor; I want to offer one or two suggestions that have come to my mind, and the public have not realized the reason why we should fight this disease. I understand that sunlight kills very quickly the tubercular germ, and, while we have suggested light and ventilation, for stores and houses, the public does not realize how this should be. If we go back to savage life, where there was nothing but the canopy of heaven for a cover and sunlight abounds, you see less of this disease, which is now doing such serious damage to our people. Instruct the people as to why they should let the sunlight in. Not only to let fresh oxygen in, but to let the sunlight in. I believe in the simple life, and the more nearly we get back to the simple life the more nearly we will dispel this disease. In big cities we find more tuberculosis. Why? Because we find more homes where the sunlight never enters—where the ventilation is very poor, in the slums and tenements, which are dark, gloomy and without ventilation or cleanliness. When we teach the people to let the fresh air and sunlight into their homes, then we will more nearly be able to conquer this disease.

By Dr. McAnally: I don't see how you can expect the common practitioner to instruct the people how to prevent tuberculosis. It would be just as reasonable and just as easy to teach them not to drink whiskey, or not to have smallpox. They will accept your suggestions in regard to whiskey just as nearly as they will in reference to tuberculosis. We must have law back of this, in order to accomplish anything.

By Dr. Lewis; I think we have all the law we need, if we could just enforce the laws. The Board of Health will help, if you will just enforce the laws. I want to know here how many doctors who are present report all infectious diseases to the Superintendent of the Board of Health? The law requires it. To give you an idea of how much effect the law has in regard to this matter. In the city of Raleigh they have an ordinance requiring the doctors to report to the Superintendent of the Board of Health every case of tuberculosis that comes under their supervision, under a fine of \$20. I was approached on the subject of that ordinance. I said it was all right theoretically, and as a matter of fact, our

doctors are here but they ain't gwine. The doctors won't report the cases. Six months after this law was passed, I asked the Superintendent of the Board of Health how many cases had been reported, and he said one. Numbers of deaths had been reported. This one case was reported by Dr. Knox, who is one of the most conscientious men in the State. Not so much law is needed, but teach the people to enforce the law. Let us try to educate the people, rather than call for more law.

By Dr. Faison: I want to say that every man who administers law in Raleigh ought to be arrested for not carrying out the law. I say they are a worthless lot down there in Raleigh. If the people of North Carolina don't obey the law, they ought to be made to obey the law, and if the men who administer law don't carry out the laws, someone else should be put in their places, who will enforce it. If they would yank these doctors up and make them pay \$20 for not reporting the cases every time they neglect it, they would comply with the law in this respect. That talk is not worth a cent. I believe in having laws and administering these laws. If Raleigh can't administer law, then it ought to be moved to another place (Charlotte for instance), where they can do it. If that is the kind of law they administer in Raleigh, and they do not try to enforce the laws, they should not have that power. Why the very atmosphere there keeps them from making law. I am sorry that Dr. Lewis has had to admit that Raleigh is that kind of place.

We have no law here requiring the report of cases of tuberculosis by doctors. If it was on the statute books here, I would report every case that came under my eye,—if it was my wife, I would report her. That is the kind of law abiding citizen I am. If I was in Kitchin's place I would ask them to make a law like that. I don't know that he will, because he don't know enough about it, but if we ask the Legislature, and they have the right kind of men in it, then they will pass that law. Then we can educate the people. We can ask them to do things, and give them the law to make them do it. That is what I am asking for. That is what I am demanding.

By Dr. Minor: There is one thing he said that I agree with, but I must rise to side with Dr. Lewis. What is law? Law is only the expression of public opinion. Dr. Lewis is perfectly right. No law is ever higher than the opinion behind it. A law that does not have the approval of the people making it, is not worth the paper it is written on. Educate the people to an opinion, and then you can get all the laws you want

to enforce these opinions. The thing is to educate the people to the point of making these laws, but let us not ask for laws until the people are educated up to making these laws. We are progressing. We do things now that our grandfathers never thought of doing. I am an optimist, and I believe the world is coming on and getting better and better and we are getting higher and higher. Now, this association is one of the means that will advance our race. That is how our association must be built. We must draw the laymen in and the women in, and they must fight with us, if we succeed. Let us go very cautiously before the legislature. We may have to go to the legislature for money. When we have carried our propaganda for one or two years, and public opinion is with us, then—don't you worry. The legislature will then come to us and ask us if we don't want some laws. The first thing is to educate the people.

By Mr. Patterson: I want to call the attention of this association to its unconscious influence in enforcing the laws of this city already on the statute books. The city has a statute requiring that people shall not spit on the streets, and yesterday they got a hustle on them, and appointed five men to go around and prevent people spitting on the streets.

By Dr. Williams: One or two brief words. Greensboro has the same law that Raleigh has in regard to making reports on all cases of tuberculosis that come under our notice. It fines us \$25.00 for a failure to comply with this law. Now, to show you what law is worth, I have on three separate and distinct occasions gone before the board of aldermen of Greensboro and asked that this law be enforced; each time they promised that it should be enforced. Immediately after this, the first man I saw expectorate on the street was a policeman who had tuberculosis, and was in front of the city hall, next to the office of chief of police. We have not yet created in Greensboro the public sentiment necessary to enforce that that law—to make it worth anything. We are going to have it. We are going to work on it.

We have another law in Greensboro with reference to tuberculosis, and that is that every physician in Greensboro must report within twenty-four hours every case of tuberculosis that comes under their supervision. Three-fourths of the cases that are reported, are reported by me, because I make a specialty of treatment of tuberculosis—not because of my large practice, but because other doctors are not interested to the extent they should be. What is the law worth? Nothing. It is not only worthless, it is disgraceful. There is only one way

under heaven to get the public interested, and that is to educate them, and when the people come to fully know the absolute necessity of preventing this disease, they will see that the law is carried out.

Dr. Minor reads resolution, and makes a motion that the resolutions be adopted.

Motion is seconded.

ADDRESS BY DR. CHAS. T. HARPER.

Mr. President: The subject which I have chosen would probably have been made more interesting to this gathering if discussed by some one more familiar with its economic aspect and better qualified by statistical study to impress upon you the truths which can be proven by figures.

Permit me, in advance, to say that in making use of the word "poor" in these remarks, I am not referring to those who may be classed as actual paupers, dependent upon charity, but to those who, able when in health, to earn a reasonable and satisfactory support for themselves and those dependent upon them, are yet nevertheless, woefully hampered when rendered incompetent for work by the effect of a lingering disease, requiring the best medical and dietetic treatment.

The duty of our civil government, national, State, or municipal, to those afflicted with tuberculosis is a matter of very great importance, from the standpoint of financial economy as well as from that of humanity.

That duty is being thoroughly discussed in many municipalities, and by some of the States—in fact, the measure has already taken practical shape in many localities by the establishment, under governmental control of hospitals, sanatoria, day camps and play grounds, for the treatment of tuberculosis.

Those suffering from tuberculosis may be broadly divided into two classes, first, those who through their own or through the financial ability of their families, can incur, without undue strain, the cost of proper treatment, those who are unable to continue their respective occupations, cease to be wage earners, and are therefore less able to provide for the expenses of even the ordinary kind.

From the standpoint of municipality to prevent the spread of communicable disease, this distinction is of value obviously, it not being my intention to accentuate the humane view of the subject.

I draw the distinction because the danger of communication, and therefore of financial loss which I will treat upon later, is less in cases where the patient is well guarded by the most careful sanitary pre-

cautions, skilled nursing and best medical attention.

It is with that larger class of self-respecting, wage-earners, when in health, part of our communities, that this article has to do.

It is for this class that we provide public hospitals, supported by taxation, to which having contributed while in health, from which the tax-payer can expect and receive assistance when in need.

Please note that what is charity, which pride often prevents a man from accepting until too late to be of much value, when rendered individuals or organizations, become a matter of right when taken from a fund to which he himself has been a contributor. This is the feeling which induces a man to accept aid from a fraternal order as a matter of right, which he would not take from any other society or from any individual.

The wealth of a community is to be estimated by the number and industrial capacity of its citizens, the value of its real estate holdings, the volume of business transacted and the amount of invested capital in productive enterprises. Whatever abnormally reduces the number of its people, whatever lessens their capacity for self maintenance and for commercial production, seriously and directly affects the prosperity of the entire municipality. How is the financial health of a community affected by the physical health of its people? As to that part which tuberculosis plays, the records of municipalities and the conclusions of many scientific investigators speak—in one voice.

Mayor Hibbard of Boston, in an address delivered in Charlotte, North Carolina, before the Municipal Convention, speaking from the economic standpoint, says, "The money cost of tuberculosis falls into the classes: first, the loss of earnings of patients for an average of more than three years before death, with the cost of medical attendance, special food, etc., which average \$2,400 for each death. Secondly, accepting the estimates of Professor Fisher of Yale, Dr. Price of Maryland, and the great foreign experts, the capitalized value of the lives reduced by an average for both sexes of twenty-one years, making all possible deductions, is about \$8,000 each, so that in a municipality the size of Wilmington, and having 60 deaths per year from tuberculosis, there is a loss to that city of \$480,000 per year.

J. Sloan Fassett, writing on the cost of tuberculosis, in *Charities and the Commons*, says, "that it is estimated that 200,000 people die of consumption in the United States each year. With the money cost of tuberculosis including capitalized earning power, estimated at a per capita cost of \$8,000,

the hand of this destroyer lays its paralyzing grasp on \$1,600,000,000 worth of human productive energy each year." Such vast figures represent almost inconceivable values. We are hardly able to comprehend them, and it would require only a few years of such continuous losses to reach a sum almost beyond the apprehension of the average citizen.

Do you know, Mr. President, that it is estimated that the mortality from tuberculosis exceeds the combined deaths from war, famine, plague, cholera, yellow fever and smallpox. And do you know, Mr. President, that with the appropriation of \$175 per patient, sanatorial cases, lives can be prolonged ten years? Then it seems to me that if these estimates are even approximately correct, we are presented with a money loss, producing a continuous drain upon our vitality, which every means known to the human intellect should be employed to remedy.

And this brings us to the consideration of the duty of the municipal government to provide for the protection of the community at large from a disease as communicable as is tuberculosis with the same care that it does against the spread of yellow fever, smallpox or diseases of similar importance. I contend that it is of greater importance, because of the greater number of deaths from this disease, that it inflicts longer suffering on the individual, it taxes for a longer time the endurance and finances of friend and family, and that it is more insidious in its approach and really causes heavier loss to a community.

A very large amount of good, good hardly calculable, has been done in the relief of those afflicted by this evil, by our religious and charitable organizations, and especially by our American Red Cross Society. All honor to them for what they have done and are continuing to do. I believe that more lasting results can be had in the right direction by the employment of other methods. Necessarily the efforts of such bodies are restricted in many ways, restricted by other demands, by limited means, and by inability to exercise the control you would expect from a governmental sanitary department. By assuming the management of the work of preventing the spread of this disease, the municipality could bring to bear agencies not possible under the voluntary and charitable methods.

I will not enter into detail of the procedure of taking charge of the situation that we now exist. Those details can be worked out later.

What I wish rather to emphasize, at this time, is this one fact: That it is the duty of the government, under the conditions set

forth, to do something, and that something can be generalized under the proposition that hospitals, sanatoria, camps and play grounds should be established for the cure of the disease, for the prevention of its spread, so, like many of the evils that afflicted mankind, it will soon be reduced to a minimum or entirely eradicated. Competent medical attention, trained inspectors and nurses, proper food, fresh air and employment are concomitants, but necessary ones, of the situation. There should be power *police power*, to treat the afflicted individual as a source of infection, and danger to those about him, and if he neglects to obey the sanitary rules of the municipality, to be isolated under police and medical supervision, until all danger of infection is passed.

There should be education, the awakening of public opinion, so that sanitary rules may be known and observed, the education of the young through the public schools, so that we may protect the future as well as care for the present, the education of the patient and of his family, a duty, Mr. President, too often neglected by our medical men, so that the danger of contagion may be reduced to a minimum. All these things should be done through regular governmental effort and by authoritative direction.

I have shown, Mr. President, that there is a definite, well ascertained, commercial and monetary loss in every case of tuberculosis—that such loss falls upon the municipality by abstracting from it a part of its wealth, both in the loss of productive capacity and the abnormal cost of unnecessary sickness. We know that organized is less expensive than individual labor. That is the reason we provide a police force to protect our homes, because it is cheaper for the tax payer than for him to employ a watchman individually, we provide sanitation in municipalities because it is more economical and more efficient than for each individual to sweep before his own door, we provide hospitals for the sick because we can furnish better and cheaper service to those needing it than can be had by individuals. All these things we do in the interest of the citizen and is done by the municipality, and in so doing we undoubtedly reduce morbidity and mortality. Is tuberculosis a disease to be eliminated by intelligent effort under municipal direction? I believe it is. Mr. President, in localities where the mortality from tuberculosis is growing less, what are the conditions? It is these, that the government has the situation under complete control and every one is obeying the rules, regulations and the laws of that municipality, and those that are in charge are seeing to it. If my

figures have proven anything, they prove that the cost to the tax payers of this great "white plague" is an immense one. It is economy of the simplest and wisest sort to expend a small sum to prevent a greater loss, and in thus saying I take no account of that great humanity which bids help the sick and suffering.

No discussion.

Meeting adjourns until 8 o'clock, p. m.

Tuesday Night—Evening Session.

By Dr. Williams: I beg to submit these resolutions and move their adoption:

WHEREAS: The daily press of Charlotte is devoting a large amount of space to the publication of the proceedings at this meeting, and is aiding in this transaction, by putting before the public the purposes of this association, etc,

Be it Resolved. That this association expresses its thanks for the interest shown and the assistance rendered.

Be it Resolved. That a copy of these resolutions be given to the daily press of Charlotte, and that a copy of these resolutions be printed in the records of this meeting.

Motion to adopt these resolutions carries unanimously.

By Mr. Dunn, President: The first number on our program this evening, is "Food as a Prevention of Tuberculosis." I take pleasure in introducing to you Dr. Lambeth of the University of Virginia.

Remarks by Dr. Lambeth, preliminary to reading paper.

Ladies and Gentlemen:—When asked to be present by your distinguished Secretary, I asked him to say to me whether my paper was to be technical or popular: He wrote me that, as it was a meeting of the Medical Association of North Carolina, it might properly be technical, but as it was a meeting to which the public was invited it might be popular. Of course, this solved the problem, and relieved me from any embarrassment.

Since his invitation, I have been trying to make close schedules, and I have been traveling over the country, far away from text books and laboratories; hence, the trouble of writing technical papers, and, so far as I know, I have never done a popular thing in my life. A few weeks ago Virginia defeated North Carolina in foot-ball. Therefore, I am very unpopular in North Carolina since then. Just two years ago North Carolina defeated Virginia in foot-ball and I was then very unpopular in Virginia.

I desire to say that I am a North Carolinian, in full sympathy with all the good things North Carolina does, and she does enough. I am not only a North Carolinian,

but I am actually an ex-citizen of Mecklenburg. I lived near Charlotte for some considerable time, and I regret that I was unable to even make a mark upon the sands of Mecklenburg.

The subject I am going to discuss is a very feasible one. Everybody loves to eat, and all the rest love to drink. I desire not to apologize for having left North Carolina, but I would like, somehow or other, if North Carolina could take care of old North Carolinians who have gone away, by a Carnegie fund, for instance. Whenever you establish the Carnegie Donation Fund, I hope to return to North Carolina.

Food and Tuberculosis.

Dr. W. A. Lambeth, University, Va.

Mr. President and Gentlemen of the Association, Ladies and Gentlemen:

On receipt of the invitation I asked your affable secretary whether my paper was to be technical or popular. He informed me that as it was to be a meeting of scientists it would best be technical, and as the public was invited it should be popular. Of course this relieved my embarrassment. Since the receipt of the invitation my time has been spent in traveling, away from laboratories and libraries, hence I cannot make it technical. And as I never have been associated with a popular cause or event I cannot make it popular. I remember two years ago Carolina defeated Virginia in foot-ball. I was not then popular in Virginia, for this year reversed the score. I am certainly not popular in Charlotte. As I cannot therefore do both I shall probably do neither.

When one returns to renew associations long since broken there peep around every corner and from behind every door the ghosts of memories when life was young, full of hope and boyish ambitions that have vanished in the struggles beyond.

It was an intended kindness on the part of your distinguished secretary to invite me but it was a real charity on the part of your society to permit me to come, for I bring no fruitful message, but shall on the other hand take away a kindled enthusiasm to continue less grudgingly and more joyfully the tasks set before me.

I may be permitted the usual liberty of doing violence to the title of my paper. Man is an omnivorous animal and under cultivation his appetite often takes him far-afield. If the menu I offer should contain that which you do not relish, or that which is distasteful, please remember that it is *table de hôte* and you are expected to accept an *entrée* only if it is pleasing to you, the *chef* will be flattered if you can find a *pièce de résistance*.

While then I have no new message, I beg permission to tell an old story—a story any one of you could better tell—to call back more vividly your attention to a few trite sayings, a few hoary observations and a few old practices. My ramblings will claim no other excuse than perhaps laying the emphasis at a different point in the story.

All scientific medicine has for its single object the cure of disease, and sanitation the prevention of disease, but our responsibilities are developed in accordance with the perspective from the path by which we approach it. All subjects are many sided and when viewed from a single point may present a dignity as great as a view from the opposite appears pusillanimous.

Specialization which has been the bearer of so many blessings to mankind, has also brought some misfortunes. It has increased the sum total of human knowledge, converted many theories into demonstrated sciences, and substituted for lucky guesses unquestionable facts. All this and much more could be said in laudation, but specialization has also another side. In our haste to do obeisance to specialists we have heaped upon them unearned honors in crediting them with many good things they have not done, and we have failed to charge them with many evils for which they are responsible. By some the discovery of vaccination, germicides, the germ theory of disease, chloroform and mosquito-born yellow fever is ascribed to specialists, as a matter of fact Pasteur was a physician and Reid an army doctor, while Jenner, Simpson and Crawford were every-day physicians who would not have known a microscope from a threshing machine,—a bacillus from a hippopotamus, or a laboratory from a cotton mill. The great milestones of medicine were planted by one physicist and five general practitioners. The chief and unpardonable, although unavoidable, sin specialization is responsible for, is the emasculation of the family doctor. It must be so and we will believe it best, but while our faith in its righteousness may be a solace to our disappointment it cannot obviate the social bereavement. That grand old man, a combination of sagacious intelligence, accurate observation, quick perception and right conclusions, who astride his saddle bags followed the cow-trails and hog-paths of our pastoral forefathers is no more. In rain and sun, in sleet and snow, his sympathetic conscience led him to his duty. He greeted us as we entered this life, counted the moles upon our bodies and spanked us before turning us over to the nurse. He watched the progress of our childhood and became our friend and ad-

visor on all the important affairs of adult life, not omitting religion or matrimony. Finally he held our hand as the shadow of earth fell upon us, and we heard his encouraging voice as we slipped away from that which is known to enter the great unknown. This real, warm blooded, personal friend who may not have known the habits, family resemblances, or the conjugal affinities of the tubercle bacillus, but who had numbered the hairs on his patients head, has been supplanted by a dozen, one of which pulls our teeth, another washes out our stomach, a third dissects out a yard of our alimentary canal, until instead of being a patient we have become a series of numbers on the books of a regiment of impersonal specialists. Do not understand me to discredit the labors of the specialist, for the eight by ten plots of the field of human knowledge which have been parcelled out to them have been well cultivated, and while the product of science has been improved there can be no question but that he who has improved it has to a certain extent been his own sacrifice. His eternal scrutiny of the particular has forced him to overlook the general and more important whole; has caused him to forget that the synthesis of the parts is a work different from and bigger than the investigations of the detail. Preparation for the practice of medicine is perhaps too special. There cannot be adequate knowledge of a particular class of facts without some knowledge of the other classes.

Every organ and every function simultaneously presents various orders of phenomena and these phenomena are so interwoven that full comprehension of any group involves partial comprehension of the rest. At first thought the extent of erudition thus suggested as requisite may seem impractical, if it is not so. If the worthless knowledge now included in what is supposed to be a good medical training were omitted, all that is needed for practice, most of that which is desirable for general education, and a good deal of that which we recognize as decorative could be acquired in the time usually given to the young practitioner. When medical education is rightly pursued the cardinal truths of each branch may be clearly understood and firmly grasped, apart from the many corollaries commonly caught with them. (After there has been gained such familiarity with these cardinal truths of the several branches as renders their chief implication comprehensible it becomes possible to reach rational conceptions of any one group of phenomena, and to be fully prepared for specialization.) Too often our specialist has become unmindful of facts as settled as mathematical axioms

in search for things of questionable truth. We have needlessly shifted the center of gravity from the things known to the things unknown. We are so engrossed with specialization that we begin to regard it as the end itself rather than the means to an end. We begin to think of it as the body rather than the branch. The function of the specialist is to follow out and follow after the detail implications which generalizations suggest. His office is one of verification, modification or refutation, rarely that of a pioneer or discoverer.

We have been so busy tracing out the life history of the bacillus tuberculosis that there is great danger of overlooking man himself who is the other and important factor of this vital question. We are so intently studying the infectiousness of this contagion that we neglect entirely man's vital resistance. We are so occupied with the reduction of the virulence of this organism that we fail to give the needful stimulation to man's natural immunity. We are loth to learn and slow to acknowledge that while the sick appeal to us strongly, and must and shall be ministered to, that a greater responsibility is the care of the healthy. Without going so far as our distinguished Chicago contemporary who regards disease and drunkenness as blessings to society because of the removal of the rotten wood from the tree of life yet we can nevertheless agree that he who raises the stamina, increasing the productions and enjoyments of life of the healthy human family, is greater than he who cures disease of the sick. In the one case human life is accentuated which is a positive service, in the other case physical retrogression is prevented and maladies remedied which is only a negative service. The former is an added power to society, the latter a sympathetic kindness to an individual.

A healthy man is a mental abstraction, no such being existing in nature, from birth to adult life there goes on within us, even within the healthiest, a complex series of phenomena evolutionary and degenerative, the former predominating until after adolescence when the destructive processes begin to gain upon the constructive, then the functions begin to fail, the tissues degenerate in accordance with inflexible laws, and we see the wearing out of the machinery of life. At birth the thymus gland is already disappearing, after twelve the eyes weaken, after twenty-seven the bones grow smaller and more brittle, after thirty-three the muscles begin to waste, after the Osler age the brain ceases to develop, and after fifty the great glands neglect their functions; thus there is not a moment of ones life in which every organ and every tissue

is present in full development along with the perfect performance of all their functions, therefore, there never can be a perfectly healthy man. There are, however, various degrees of what is regarded as good health; commonly health is alleged and admitted where no physical disturbance is manifest, but there is a wide gap between this point and that which shows itself in high spirits, great power, and overflowing energy.

In order to prevent this paper from becoming a treatise on medical education before closing, it may be well to refer inadvertently to the subject assigned me.

To begin I say that modern man does not eat enough; the volume may be great enough but the nutrition is insufficient. He does not eat wisely, for he frequently destroys a good appetite with worthless so-called food, involving great digestive effort upon substances which if absorbed are at best but feeble nutrients. He does not eat often enough, but undergoes short periods of partial engorgement interspersed with periods of needlessly prolonged fasting.

Without defending the gourmand we can nevertheless condemn the gourmet; while modesty with a reasonable amount of delicacy in the manner and matter of eating is a mark of advancing culture, we are not required to applaud the dilettante who flits from vaporous tid-bits to the nothingness of ethereal and aromatic quintessences. A wise man has said that to be a gentleman one must first learn to be a good animal. Without prescribing aesthetic consideration in the diet, for the sense of taste is as much worth cultivating as the sense of hearing, we must condemn the substitution of the enjoyments of taste for the needs of nutrition. We should refuse to be beguiled into thinking we have nourished our bodies when we have only tickled our palates.

There is an expression "We are what we eat," and that which gave origin to this was the same that led Brillat-Savarin to exclaim, "Tell me what you eat and I will tell you what you are." Kean, the great British actor, said, "I must adapt my food to the parts I play." "I eat pork for tyrants, beef for murderers, and mutton for lovers." These expressions overdraw the truth, but they all rest upon a basis of fact which is not only applicable to individuals but to societies. Meat eating races have controlled and directed the destinies of civilized mankind. Contrast the beef-eating British and American with the rice-eating Asiatic, the sausage-eating German with the macaroni-eating Italian. A great English physiologist said that had he inspected the commissariats he could have forecast the result of the Franco-Prussian

war. The same truths hold with the lower animals. The powerful, leaping, carnivorous panther and tiger put to ridicule the sluggish, ponderous, herbivorous elephant and rhinoceros. The quick-darting and explosively-moving birds are those that feed on insects and not those that feed upon grain. We might multiply illustrations indefinitely. We could contrast speed with endurance, active health with passive health; as a pasture fed, domestic cow enjoying her cud is a good type of health, but surely a different type from the corn fed, blue ribbon jumper. The speedier thyme-eating hare must double on the trail to escape the greater endurance of the omnivorous hound. The meat-eating pugilist can fell the blacksmith with a single blow, but the carbohydrate-consuming blacksmith could quickly exhaust the pugilist in striking the iron. If, then, we would combine speed and endurance we must combine the foods that produce them.

A healthy man to be healthier still will beware of the dyspeptic wails of a diseased stomach. When stoical old Seneca said "The pleasures of eating deal with us like Egyptian thieves who strangle those whom they embrace," it must have been after one of his periods of fasting in endeavoring to prevent Nero from poisoning him. And when Carlyle urged us to "rise from the table hungry" he was still struggling with his raw cucumbers. Such eructation from a sour mannered, dyspeptic, old philosopher should be catalogued with his mistakes and not left unchallenged to confuse society. He needed the services of a doctor. The healthy man should rather believe in good-tempered Sam Johnson, who said "I love to eat; he who does not attend to the wants of his stomach can hardly be expected to attend the wants of anything," or with Aristippas that "good cheer is no hindrance to a good life" and with Brillat-Savarin that "the destiny of nations depends upon the manner in which they feed themselves." All the established cures for tuberculosis have as their distinctive feature the element of feeding, and moreover forced feeding at that. Why not feed him first and prevent it? Away with the boogy, dyspeptic scare.

Not only should we eat more rationally as to quantity and quality but there should be a wiser adaptation of food to ourselves and to our environment. There is a great difference between the demands of the body of the banker and those of the blacksmith, between those of the teacher and the teamster. Intellectual pursuit requires as much proteid as toil but surely much less carbohydrate. The tall slender man eats more and needs more than his short fat brother.

Gravity exerts greater resistance to the pumping of the heart, and the loss of heat is greater, the skin of a six foot man weighing one hundred and fifty pounds contains twenty-two square feet, whereas that of a five foot seven inch man weighing the same measures only twenty feet; thus the tall man, no greater in weight, must eat one-tenth more than the fat man to compensate for the loss of heat alone.

"Leanness and longevity" is a saying which has many exceptions, on the other hand that one which asserts that "a rotund figure rolls all the faster down the hill of life" should not needlessly alarm the sleek, well-fed man, although it may give grave concern to those whose fatty proportions have reached the diseased stage of obesity. The fat man requires less food and usually eats less than his lean, lanky cousin; for, while his bigger body may contain a greater number of cells to be nourished, it is not the number but the kind of cell that is important. Fat cells are essentially dead cells and need little sustenance, whereas the smaller number but active nerve and muscle cells of the thin man needs constant repair.

The efforts of an athlete in training is to diminish the fat and water, the former not only useless but a hinderance, the latter water-logging the muscles. He therefore eats less fat and less food that tends to form fat and his exercises are directed to the removal of both. Yet bear in mind that with all this reduction there goes increased eating. The pugilist and foot-ball player eat more proteid to produce explosive muscular action and eat more sugar to increase their strength and endurance.

I am not sure that we relate the food we eat quite sufficiently to the climate in which we live. The man living in a cold climate or much out of doors in a temperate climate requires more fuel than those living indoors or in a warmer climate. Is it not a little incongruous that the member of the same family living much out of doors should sup from the same table with those living indoors?

Arctic explorer Kane wrote that so long as his men could go to bed with full stomachs they slept in comfort, but if they retired hungry no amount of covering was sufficient to keep them warm. The mother whale and walrus inhabiting the colder seas give to their young milk containing fifty per cent. of fat, whereas mother Eve gives to us milk containing only five per cent.

The Esquimaux living in his snow-house eats a gallon of blubber per day—if he can get it. Whereas the equatorial Brazilian can live a week on a handful of leaves and

nuts. Even the vegetable world gives us examples of climatic adaptation. Oats and corn, the cereals rich in fat, are indigeneous to cold climates, whereas wheat and cane are Southern grasses with little fat but much sugar and starch. Then, too, I think we might wisely examine our personal peculiarities, for in the ultimate analysis every man is a law unto himself.

The Corliss Engine Company have never succeeded in building two engines of the exact same fuel-efficiency, so the great builder of man has never issued duplicates. Some men are naturally more efficient machines than others; they just simply put their food into better skins.

We could also better adapt our food to the age of the individual, but without comment it is sufficient to quote from your patron Saint Hippocrates who said, "Old men bear want of food best; then those that are adults; youths bear it least, most especially children, and of them the most lively are the least capable of enduring it." The accuracy of this observation is attested by the fact that twenty-five hundred years have not been sufficiently long to disprove it. Instinctive hunger is the voice of nature and cannot be disregarded, nor should it be humbugged. The cravings of the appetite can safely be followed unless they have been perverted by unwise stimulation or blunted by excesses, but it is the need of the tissues to which I refer. Regularly and frequently administered food is wisdom. The time of serving meals is a social accident which grew out of habits of industrial and social life. There is no more inherent reason why man should eat three meals per day than that he should eat six. We can now find traits inherited and appropriate to wild and primitive life, but inappropriate to modern civilized life; with such it was the part of wisdom to take food in excess of immediate needs in accordance with the irregularity and uncertainty of supply. As civilization advanced man so ordered his duties and made certain the supply that he could eat regularly three times a day.

As civilization advances further there will be no reason why we should not continue to adapt ourselves to the course of nature and give to the system its nutrition as it needs and uses it rather than in accordance with social conventionality. You say don't eat between meals or you will spoil your appetite for dinner; that is just the reason why you should eat between meals. It is acknowledged that each of us are constantly taking into our bodies with the air we breathe and the food we eat, the tuberculosis germ, yet under these conditions surprisingly few contract the disease.

When a long period elapses between in-

digestion the cells of the body become impoverished, lethargic and inactive, they lose their tone and vital resistance. Their defensive powers are weakened or destroyed and it is just at this time that we fall an easy prey to disease in general. And it is observed that the bacillus of tuberculosis finds especially favorable soil in ill-nourished persons. The association between bad feeding and consumption is well established, while an improvement in nutrition is not infrequently followed by cure. This explains why diabetics who live in a state of partial starvation are so easily attacked, and tall men, as I have explained, having less food to spare are more susceptible than short men. The old family doctor knew this, hence proclaimed one of his maxims that it was dangerous to visit a case of contagious disease on an empty stomach.

If the germ is ever present in our bodies yet few contract the disease. Why? Certainly not because of any diminished virulence of the germ but because our vital resistance protects us, for as we see so soon as pronounced inanition and anemia occur we succumb to the poison. Then truly our greatest hope should be in the steadfast, unremitting accentuation of this vital power.

There may have been times in the dark ages when the long periods between hunting, fishing and fighting were so monotonous that man was prone to prolong unduly the pleasures of eating. But when as with us the occupation to be entered upon at the end of the meal is so interesting and absorbing there is all too little tendency to prolong this function. In our hurry to keep appointments with the American dollar we are frequently guilty of infidelity to a long suffering stomach. Some one has said that there was little danger of the American underfeeding; this is an unfortunate statement evidently made by an Englishman, for, while there is recognition of evils resulting from excesses in eating, there is little recognition of the consequent evils of eating too little. Ascetic bias given by false education leads the weak minded to regard themselves meritorious if they do but starve themselves. The disasters following inadequate nutrition, especially during the period of growth, are imperfect development in both size and quality of tissue and parents or employers who are responsible for this are responsible for invalid lives.

Cattle and horse breeders are wiser and know that neither can a fine or healthy animal be produced on a stinted diet. Science unites with common sense in asserting that strength, growth and vigor are alike dependent upon a good supply of food from which the body and brain of the young

are built and with which the tissues of the adult are repaired. Even when we are in a state of rest, awake or sleeping, there flows from us a steady stream of energy. The involuntary functions of the body consume three-fourths of the energy of our food, and be it remembered that it does not do so periodically, but steadily and continuously; our food, on the contrary, is taken at intervals, and there must therefore be in every twenty-four hours, periods in which the tissues are threadbare, periods of weakened vital resistance. Since the bacillus is ever present in our bodies it is common sense that we ever strive to make these periods as brief as possible or avoid them altogether. To compensate for the steady flow of energy from our bodies we should provide a steady stream of tissue pabulum bathing, refreshing and strengthening every cell of the body. Only such a measure could guarantee to us reasonable protection. This, however, is ideal, and until food tablets are made available we cannot hope for perfection but we may at least approximate it. Yes, all I have said is common knowledge, but because it is commonplace we have ceased to regard it and busy ourselves with questions more academic.

What is the remedy? I suggest that sanitary officers focus their labors more intently upon the healthy, leaving the treatment of disease to physicians. I suggest that we add to our tenets an educational crusade against the crime of hunger, not the hunger which knocks so loudly at the door of consciousness but the silent hunger of the uncomplaining tissues.

Let the public school add to its curriculum a course on feeding the human animal. Time could easily be provided for this, moreover, a little less study of the dead languages and a little more study of the living man would make it all the better for our bodies and a little worse for our education. Let the course include the physiological importance of nutrition, the nutritive values of all the available foods, the economic value of substance offered for sale as foods, and methods of preparing the cheaper foods in a more palatable manner. Why should not the public know that a woman of equal weight needs less than a man, that a growing child needs relatively more than an adult, that as much nutrition can be derived from a ten cent cut of meat as from a twenty cent cut, that a pound of corn starch for eight cents gives the same nutrition as a pound of tapioca at forty cents, that one egg has the same nutritive value as twenty-two oysters, that a pound of blue fish at eight cents is equivalent to a pound of whiting at thirty-five cents, that a pound of English cheese at thirty cents is

no better than a pound of American at twelve cents, that twenty-five cents invested in peas gives one thousand units of nutrition, in bread seven hundred and fifty, in cheese three hundred, in beef one hundred, and in eggs twenty.

That it is the demands of the palate that costs, that in the market one pays for flavor and rarity just as one pays for cut and ornament in dress, that skim milk and bread is the cheapest source of nitrogenous food, a glass of milk and a slice of bread for three cents equals thirty cents invested in beef and eggs. Let the public know that cotton seed oil is equivalent to lard, that oleomargarine is as wholesome and as nutritious as butter. That sugar and cured vegetables are more useful for the mechanic and laboring man than excesses in beef and pork.

Encourage the use of sugar everywhere and at all times. Recommend to the wealthy, chicken and cream. Let waste be discontinued and cooking be really understood. Teach the consequences of underfeeding, remove the ignorance of, or indifference to the penalty. Teach the public to discriminate between the real and aesthetic values of foods. Teach that poverty is not a valid excuse for underfeeding, for there is more real extravagance connected with the dietary of the poor than with that of the well-to-do.

To emphasize any points I may have made I reiterate that the tendency to specialization has obscured our perspective of the human organization and neglect of agencies which the doctor who surveyed the whole field of man was more familiar with. That we do not distinguish between treating the healthy and treating the diseased. That we fail to distinguish between foods and pseudo foods; that we eat relatively too little, that the conventional three meals system does not give continuous protection from contagion, that the remedy is in educating the public not in technical dietetics but in the practical selection, preparation and use of food, their relative values and the true function they play in nutrition, that we encourage the counter sale at all hours of substances of real nutritive value and discourage the vending of those which only stimulate. Why not let soda fountains abandon the coco-cola served with a cigarette and substitute chocolate with a wafer? That we encourage more frequent eating and the better adjustment of social and industrial life to the needs of the body. Suggest to those controlling labor the inauguration of milk and cracker or sand-wich periods at frequent intervals conferring a boon to the operatives, a service to society and securing for themselves more profitable labor. Encourage afternoon teas

and morning repasts by the ladies; let them trim a few inches from the brim of their merry-widows and smear the butter a little thicker on the afternoon crackers.

In conclusion I wish to say for myself that I am a North Carolinian and was once a citizen of Mecklenburg, and that to be permitted to be here was honor enough, but the compliment of a special invitation surpasses even Virginia hospitality.

This association has its functions to perform and I am confident that it will not omit to lay the correct emphasis upon the question of food. Failure of purpose, however, and a knowledge of our limitations are no excuses for languid exertions, for if we cannot labor with results that equal those of other great States and powerful associations, we can at least say with them that "not as adventitious will we regard the faith that is in us." The noblest truth we see, that will we advocate. Wherever we be and come what may, whether we eat three meals or six meals per day, we shall try to perform the right part in the world, knowing that if we succeed in accomplishing the things aimed at, well; if not, well also; though not so well.

By Dr. Dunn, President: It has been suggested to me this evening, that as President, I should have welcomed or said some words of welcome to the many people who have come here this evening. This is not our meeting. It is your meeting. It belongs to every one of you. It belongs to the people. We feel you are a part of this meeting, and to welcome you here, would be like welcoming you at your own home. If you are not a member of this Society, we want each one of you to become a member of the North Carolina Society for the Prevention of Tuberculosis. Every one of you are eligible, and we hope each one of you will join, and in opening this paper of Dr. Lambeth's for discussion, I want you to feel that each one of you are free to discuss it, I want you to feel that each one of you are free to discuss this paper. I will limit the discussions to five minutes each.

By Dr. Faison: Mr. Chairman, I don't know how to discuss this paper of Dr. Lambeth's. I can only say that I appreciate it. I appreciate it more than I can tell you. It is one of the most ingenious—one of the smartest papers I ever listened to. It covers the whole organism and the whole food supply. Dr. Lambeth says a few things, however, that sound a little strange to me. He says that he does not find any perfect people. Another thing I cannot understand is that a man who knows so much about food and its value, and knows so much about skin and tissues, and making a thin man fat, I would like to know why a long,

thin, slim man like he is, does not get fat like I am. The cells he talks about are like the mule; you can lead him to water, but you can't make him drink. You can put up all kinds of foods, but if the cells don't want it, it won't take it. That is the function of a cell, and that is why some people get fat and some don't. That is why Dr. Lambeth is not fat. His cells won't take what he gives them. I am fat. With all his knowledge he don't know as much as I do. However, I wan't to say that this is one of the best papers, and one of the most enjoyable papers I have ever listened to.

By Dr. Lewis: Mr. President, I hardly think there is room for discussion, because the Doctor has covered the ground so fully. I want to thank Dr. Lambeth, on behalf of the people for this excellent paper. I will not take up the time of the audience going into the matter of a food supply, for one knows that in order to run a machine, you must keep it well oiled; but I want to give you an illustration of how degenerate we have become in the matter of food.

In the county of Albemarle, there was a man named Jim Brown, a shingle cutter, and every day he went into the woods with his knife and axe and cut down the trees and made the finest hard cypress shingles the world ever saw. He had a fine appetite too, and his wife cooked his rations every Monday, and he would start to work early in the morning, with his pail full of his week's food supply; but on his way to work he would sit down in the jam of the fence and eat his all rations. He went to town and went to the hotel one day for dinner. The proprietor of the hotel, knowing the capacity of his appetite and the incapacity of his pocket-book, refused to let him have dinner. My uncle, who was present at the time, told the proprietor of the hotel, that if he would give him his dinner and make a list of everything he ate, that he would pay for Jim's dinner. This is what he ate—a whole ham—but the ham was merely an appetizer: a quarter of lamb, a pair of ducks, three dozen eggs and bread in proportion. My uncle paid the bill, and John Hardie saw him eat it.

By Dr. Lambeth: Mr. President, I have not had the pleasure of meeting Dr. Faison, personally, but I confess I had a whole-some dread of meeting him tonight. When the discussion was brought up this afternoon, as to whether or not the papers would be open for discussion tonight, I confess I had a selfish desire that you would not open it for discussion, as I did not want Dr. Faison to jump on me as he did this moment, nor did I want Dr. Minor to have that opportunity. But Dr. Minor has to read

his paper. I was divided between two feelings. I wanted Dr. Minor open to Dr. Faison for discussion, but I did not care to put myself in it.

Some time ago, a distinguished citizen of this State, who is now laboring in my State, introduced me to a party of his friends. He said: "You would not think Lambeth was an athlete. If you stick his head through a sheet, you will think he is a consumptive."

Dr. Faison may be my superior intellectually, but if he will go on the foot ball field, I think I can lick him.

By Dr. Dunn, President: It may be that some people here do not know that Dr. Lambeth is a professional athlete. The next thing on our program is a paper by Dr. Minor.

By Dr. Minor, preliminary remarks.

Ladies and Gentlemen:

It gives me great pleasure to be here tonight—not only because of the fellowship of my brother doctors (I am glad to see them; we doctors are always glad to see each other) but it makes me glad to see all you people here. We know Charlotte is one of the most enterprising towns in the State. I know if we can get you people interested, it will be a success. I know that you are proud of your State, and I want you to realize what you can do, and to realize that this movement is to prevent something that is constantly sapping the vitality of North Carolinians all over the State. Therefore, it is your moral duty to come forth and help your State. You medical men must necessarily lead in this meeting, but I want every one of you, ladies and gentlemen and children, to remember to take it on your heart that this is your duty, as well as our duty. The Doctors may lead, but unless you follow, the object will fail. I want this to go all over the State, so that it will not be long before what Dr. Weaver predicted will come true, that is, that where there is today a death rate of 15 percent, or 20 percent, caused by tuberculosis, will be cut down to 8 percent or 10 percent. Because it is not your own family, you cannot afford to neglect it. I want you to take it home with you as a religious duty. I want you to talk it; I want your preachers to preach it, I want the philanthropist to give what they have to it; I want you to give us your interest and assistance, and then we will see our State emancipated.

On the Relation of Store, Workshop and Factory Sanitation to the Suppression of Tuberculosis in the State.

By Dr. Charles L. Minor, of Asheville, N. C.

After centuries of carelessness and neglect the world is awakening to a realization, not merely of the dangers to individuals of Tuberculosis, but, that it is equally a danger to the body politic, and that its existence as *the scourge par excellence* of humanity is owing largely, if not entirely, to our failure to use the means at our disposal for its eradication.

The old hopelessness with which mankind formerly looked upon it as a Plague sent from God, which could not be escaped, is being removed, and we now know that if Physicians will learn to recognize the early beginnings of the disease, instead of waiting till the very man on the street suspects it, and if patients will but live strictly the sort of life that the Physician can map out for them, the disease can be cured in the great majority of such early cases. Furthermore, and far more important, we know that by proper measures its propagation can be stopped, so that we can justifiably expect the coming of a day when it shall be robbed of most of its terrors and no longer be the curse of mankind as it has been for centuries.

We need not now, as formerly, wait to commence the fight against the disease till it is gnawing at our vitals, but we can go forth to attack it in its lair, and to eradicate the conditions which alone give it the opportunity to flourish.

With our present knowledge we can no longer selfishly content ourselves with efforts at saving our own dear ones when the plague has claimed them, but must, if we would claim the name of Men, altruistically seek to help *all* suffering humanity and especially the poorest and most miserable who cannot, as well as we, help themselves, and also the great middle class whose disablement by sickness is such a loss to the community of which they form the greater part.

Our aim must be to save people not *after* but *before* they have fallen a prey to the Great White Plague, and to teach them how to keep it from their homes and hearths.

Of the three classes into which we usually divide the community, the well to do, the working class and the submerged tenth, or slum dwellers and criminal poor, the first by their means and education are able to avoid most of the dangers of infection and to successfully combat it when it has attacked them, the last while suffering from it more than any others, owing to their bad

habits, live under such miserable conditions, and are addicted to such unsanitary ways of life, that their rescue becomes, as I have said elsewhere, more a problem for the sociologist and civic reformer than for the doctor, and is properly the task for those who can improve tenement design and sanitation, who can lessen drunkenness and dissipation and can teach the semi-criminal classes a hygiene alien to their tastes.

THE GREAT WORKING CLASS.

Most numerous of all are the great working class, shop, work shop, factory and mill workers, (the farmers I here neglect as their country life to a great degree protects them) that great industrial army whose members are so often called the backbone of our land who, while they can make a good living for themselves and their families as long as they are well, lay aside so little to fall back on in time of the sickness of the head of the household.

With them his sickness is too often the beginning of their enforced descent to a lower and worse social level as waning resources force them to seek cheaper quarters which necessitate worse and worse associates for their children, and as they relinquish one by one those things which make for self respect and the decent bringing up of their families as desirable members of the community.

Hence, it is easily seen that, even entirely aside from humanitarian considerations, it is our duty to the community to step in and so improve their conditions in store or workshop or factory or home as to lessen to the utmost the chance of their falling a prey to Tuberculosis.

Do not let us try to comfort ourselves that it is not our business: in the words of the great Augustine, "*Homo sum; humani hihil a me alienum puto.*" "I am a man and nothing affecting humanity can be alien to me;" it *is* our business, whether we recognize it or not, and we cannot neglect it and do our duty as men. We are all moreover, in one way or another, employers of labor and we, no more than Cain, can cry "*Am I my brother's keeper,*" our responsibility for them cannot be shirked.

They are our fellow citizens, often our employees, or else we benefit by the fruits, of their labor in some indirect way, and even on a lower and more selfish basis, if we do not step in and help them foil the disease that is devouring so many of them, and which we look on with such selfish complacency because it does not attack *us*, the infection will spread and may probably sooner or later throw its tentacles around

our dear ones and draw *them* too down to the death that had engulfed these unfortunates.

Hence, both from altruistic and from selfish motives, it is our duty and our interest to do all in our power to improve the conditions which aid the spread of the disease amongst our working classes.

SANITATION OF SHOP.

This brings me to the especial subject of remarks, the sanitation of our shops and workplaces in its bearing on the suppression of Pulmonary Tuberculosis. All our efforts in this direction must be based on the scientifically demonstrated fact of the transmissibility of Tuberculosis, first proven by Villemain of Paris about 1860 and finally brought home to a skeptical world by the discovery of Koch in Berlin in 1882 of the actual germ.

As a result of this and other work we know that practically the only danger of infection arises from the expectoration of those suffering from Pulmonary Tuberculosis. In their sputum is found the germ in large numbers and, when dried, reduced to dust, and blown around, it can under favorable conditions (but not easily, it is true, for it with difficulty can infect man) produce the disease in those in whom it succeeds in getting firm lodgment.

True it is not like the contagion of Small Pox or Diphtheria, of Scarlet Fever or Measles, which will infect nearly every one who even for a few moments is exposed to it, or else humanity would long ago have been wiped out; it demands a prolonged and intimate exposure, generally indoors, day after day, to the germ, an infection by a large number of the organisms, a few being promptly overcome by the defences of the body; outdoors infection probably seldom or never occurs, as exposure is but momentary and direct sunlight rapidly, and diffused daylight more slowly, kills the bacillus, but, while we should take the comfort these scientifically proven facts can give, it should not lead us for a moment to relax our vigilance, or the activity of our efforts to eradicate it totally. Let me here, however, note that it is the bactericidal power of the sunlight that through the past centuries has held down its ravages, although man by building himself, in his ignorance and cupidity, dark, damp, sunless homes has done all he could to assist it.

A CEASELESS WARFARE.

In view of what I have said it is evident that, while there are several ways in which we can combat the disease, the first and the best of all is a *ceaseless* warfare against

the nasty spitting habit that is one of the chief and distinguishing curses of our land and unfortunately of the South we all love so much. In America everyone, I could almost say, spits, and not alone are our streets, which God's sunlight will to a great degree disinfect, thus polluted, but our shops and factories and our homes.

Our climate with its sudden changes and great extremes favors Catarrh, our rushing life and hastily bolted meals encourage indigestion, smoking and the far more objectionable chewing is very prevalent, and young boys think they are demonstrating their manhood by promiscuous spitting like their elders. Need I recall to you your last railroad journey or walk on the street or visit to a store to remind you that I have given a true picture of American conditions?

Not only those who know they are sick are thus, to their shame, careless; unfortunately the advance of the disease is so slow and insidious that many who do not know they are sick, or who think they only have a "cold," have in reality unrecognized Tuberculosis, a large number of all chronic coughs being of this nature, and ture, and such are a danger to a community if they spit carelessly, while it is equally true that the consumptive who carefully and properly disposes of his sputum and also covers his mouth when he coughs need be *absolutely no danger* to his fellow workmen. Thus it is plain that, if we are to succeed, the spitting habit *must* be stopped, a public sentiment against it as filthy and indecent *must* be cultivated, till the many, who for the public good will not desist, will be shamed into it by the public reprobation.

THE SPITTING HABIT.

Let the spitting habit be but once stopped and let all sputum be properly disposed of where it can do no harm, and scientists all recognize that in fifty years or less Tuberculosis would be a rare disease. Think what this would mean to humanity, think of the valuable lives in every walk of life that would be saved, of the sorrow and suffering, not merely of the invalids but of their loved ones, that would be stopped, the financial gain to the community when we recognize that every adult human being is worth \$8,000 to the body politic, the saving of brilliant minds with all they could accomplish for mankind, and we must see that steps to abolish this evil would be repaid a million times over however costly and troublesome they were. ***

That the task is Cyclopean in this country is sadly true, but it is amply worth the while. If we had only laymen to teach it would be hard enough, but unfortunately

our profession, who know the facts, have many members who will not or cannot learn.

I was once delivering an address on the subject of Tuberculosis before the Medical Society of a great State, not our own. Before me in the carpeted Assembly Hall of the State house sat many doctors, and, as I talked, my remarks were punctuated by a constant expectoration on the carpet by not a few of the assembled disciples of Aesculapius.

Thus the crusade must be waged with Doctors as well as laymen till everyone learns *that nothing that comes out of the mouth, that harbor of many harmful germs, should ever be discharged carelessly into the air.*

Street spitting we cannot hope for a long time if ever to stop but, if we can only teach that to spit on a sidewalk, and not into the roadway, is improper, we must and probably can trust our good friend the Sun to continue at the old stand undoing, out doors at least, the bad effects of man's carelessness.

It is indoor spitting that is dangerous and which chiefly spreads the disease, and this we cannot too vigorously attack and seek to eradicate. And do you ask how this bears on shop sanitation? You would not have to ask if you saw as many people as I do who have become Tuberculous because fellow clerks, fellow salesmen, fellow workmen, with a chronic cough and expectoration, spat on the floors of their stores or workshops or factories and cotton mills thus handing on to their associates the disease that already had its clutches on them. I could cite cases of this sort in abundance, from my case histories, where the mode of infection was too direct and evident to be doubted. The conditions for infection are of the best; we have prolonged daily exposure, usually in sunless, ill ventilated rooms, where the germ, freed from the sputum by being ground under foot, can remain in dark corners unreached by a single ray of sunlight and ready to be whirled around in the air with every puff of wind excited by the work of the shop.

I recall a recent case where a jeweller, a man of intelligence, became infected in this way. His father had in his store a German workman who, for several years before his death from Tuberculosis, had regularly used the floor by his jewellers bench for a spittoon.

From this the father became infected and developed a cough and expectoration and, like his workman, he too used the floor between his and his son's bench on which to spit. He too has lately died from the disease, and now his son has come down

with it, a victim to his own father's dirty habits and ignorance of the simplest hygienic rules.

Had these two intelligent men but understood the dangers they ran, and to which they exposed others, two useful lives would have been saved to the community. Again I recall a case where a man of perfect family history, and absolutely perfect past health, bought a business in seeds and bulbs from a consumptive who for years had been busy unconsciously planting the seeds of Tuberculosis all over his dark sunless store.

After a few years of working there, for let me remind you that rarely does a Tuberculous infection develop under several years from the time of inoculation, this hitherto strong, healthy man began to droop and run below par, and finally the developing cough and expectoration lead to the discovery that the leprosy of Naaman had indeed fallen upon him.

Again I recall a case where I am satisfied that the ineradicable spitting habits of an officer of a State administration, who, even after he knew he had the trouble and had been told of its dangers to others, could *not* learn to give up an inveterate habit, and continue to spit carelessly around his office, till the advance of his disease no longer allowed of his getting to his work, will sooner or later have its results in the development of Tuberculosis in those who worked under and with him.

THE SPUTUM SYSTEM.

One more sad case not in my practice but of which I was informed by an official of the Government Printing Office in Washington, which now has a perfect system of sputum disposal. One of the printers, a young boy with proper ideas as to promiscuous spitting, was much worried by the nasty and free expectoration of a fellow workman in another part of the room. The latter, finding this out, took pleasure in worrying his companion by passing by his form and spitting on the ground by him, not knowing that he himself had Tuberculosis. Not long after his own death by the disease the victim of this terrible practical joke came down with it also.

Every year I see many such cases that have, without reasonable doubt, become infected from careless fellows in office, shop or workshop, through this nasty habit, till I feel like crying out "who shall deliver us from the body of this death," for there is no lessening in its prevalence.

But while spitting is the fundamental cause, it is not the only cause of the spread of the disease amongst the working classes in their work places or in their homes,

though I must here neglect the latter as without my subject. Lack of air and ventilation and sunlight in their work places, unduly long hours, child labor, improper opportunities for eating and improper food are all active in a less degree.

Those who, like doctors, daily have to inquire minutely into the modes of life and work of American citizens know as I do how generally sunless, often almost windowless, and rarely or never ventilated at all, are the majority of American stores, workshops and factories.

Even the highly paid officers of big corporations often work, I have found, in dark stuffy offices with a cubic content of air and a window space that violates every rule of Hygiene.

How much worse are the large majority of dry goods shops, where your wives and daughters get their clothing, the noses and eyes of those of us who have ever gone shopping in these places with them, have amply demonstrated.

In the South, of and to which I especially speak, our shops and stores usually are ventilated, if that term can be applied to it, solely through one door at the rear and one at the front, the windows not opening, and the doors being connected by a long, dark, artificially lit tunnel whose atmosphere reeks with humanity and with dust, and whose foul air is never properly removed.

What must be the effect on the clerks who spend long hours under such conditions and in such air it takes no very vivid imagination and no medical knowledge to realize, and it is only the short stay there of the customers that makes it harmless to them.

How much worse this is made when the clerks, as observation teaches us is commonly their habit, spit on the floor for want of, or despite, spittoons, and rub it dry with their feet, I need not tell you, yet that such habits are the custom we all who have wide awake eyes in our heads well know.

A proper supply of spittoons, properly cared for, and daily properly cleaned, are practically unknown, and clerks, proprietor and customers breathe in a mixture of foul air, dried sputum dust, and street dirt horrible to contemplate.

No wonder grippe spreads rapidly when once a few cases appear in our midst, and if tuberculosis were as easily transmitted who could escape?

Not to be forgotten in its effect on the dissemination of tuberculosis are the long hours which lower the resisting power to disease of clerks and workmen and factory operatives, and especially of the poor chil-

dren whom the cupidity of corporations and parents forces to work at the loom when they should be outdoors in God's pure air.

The under-nourishment which workmen suffer from can only be here considered in so far as shop rules fail to give proper time for eating; the quality of the food is a question to be attacked by those who seek to teach good and decent housekeeping to the workman's wife.

In combatting these errors our hope must lie in awakening the employers' sense of personal and moral responsibility for the conditions to which he subjects his employees, and those who, like myself, trust, in the final analysis, to the inherent goodness of the human heart, cannot but believe that in time we shall succeed in such efforts.

THE EXISTING CONDITIONS.

Thus I have briefly sketched to you the actually existing conditions.

What are we going to do about it?

Can any one with a spark of humanity, of love of his kind, sit by with folded hands while his fellowmen sicken and die, careless because *he* is not directly affected, because as far as he knows *his* dear ones are safe?

Selfishness is doubtless the fundamental human sin, but I think too well of humanity not to believe that when once a crying need is made clear men will arise unselfishly and courageously to meet it, or when an abuse is laid bare will be ready to fight it.

In the North already men and societies, notably our parent society, the National Association for the Study and Prevention of Tuberculosis, are struggling with the problem, and it behooves us Southerners not to be behind our Northern brethren in taking up the fight.

"We have stores and workshops and factories, in daily increasing numbers, *we* have our sufferers from tuberculosis which was acquired under these conditions, *our* hearts are as warm as theirs, even if our pockets are not yet as long, and we would do violence to all the traditions of our ancestors of whom we are so proud, and be unworthy of their good names, if we *too* did not gird us to the fight like men.

The organization of this Society, I like to think, is a proof that *we will*, and it would be a shame on our pride of State if we let its mere organization satisfy us and did not let it lead us to practical work. I would then suggest for our first object of effort a campaign against the bad sanitary conditions of our stores and workshops and factories and mills.

Let a carefully worded circular be gotten out and put into the hands of the head of every store and factory and mill in the State

and published in all our State Journals, lay and medical, showing what can be done to eradicate the faults that exist.

ADVANTAGES OF SPITTOONS.

Show them how spittoons properly numerous, properly placed, and properly cared for, can go far to prevent the drying and disseminating of sputum, show them how proper notices to clerks and workmen can explain to these their own interest in the careful disposal of their sputum, teach them how important for their own and their employees' health is a daily thorough ventilation of all such places, show them not merely the humanity but the good policy of cutting ample window space where possible so as to let in God's sunlight, and thus lessen sickness amongst their help, with the resultant saving of time and money to the employer.

Doubtless many will pay no heed to all this, for we are yet far from the millenium, but some *will*, and by degrees we will build up such an enlightened and powerful public sentiment as will *force* the selfish and the ignorant to follow the lead set by better men.

With such a campaign of education, pushed by leaflet and by the powerful and aroused public opinion and by the aid of the medical profession and the press, which have both proven themselves ever ready to help along a good cause that is for the benefit of the public, we will begin to make progress, slowly at first, doubtless, but faster and faster as the truth becomes better and better known, till, finally, we can dare to dream of a time when philanthropy, lead by medical science, shall usher in the new day, and tuberculosis, that dread enemy of mankind, shall be banished from our midst.

By Dr. McNairy, Lenoir, N. C.: I enjoyed that paper very much. I want to ask one question, and that is, if he intentionally omitted the kitchen. It has been said here today that the negro was the most serious problem that confronted us in this work of fighting tuberculosis. I have been struck in going into homes in my work, and no doubt many of you have noticed the same thing, with that fact that mothers intrust everything—even to her baby, to the cook. When I see the unsanitary condition of the surroundings of the kitchen, how dirty some of them are, how poorly the rooms are ventilated, I am surprised that mothers do not correct these conditions. It is this very thing that is helping to spread this disease and we should try to remedy these conditions in the kitchens, and instruct the people as to the great danger it is to them and their families.

By Dr. Munroe, Davidson: I enjoyed very much Dr. Minor's paper, and I endorse all the suggestions made by our eminent friend, Dr. Minor, and I hope the suggestions contained in the resolutions offered will be carried out. I voted for this resolution, and if I happen to be a member of this committee, I will try my best to have this literature distributed. I am in thorough sympathy with Dr. Minor and his suggestions, and I would not for the world throw cold water on anything he has said, but he has said some things which might have a tendency to do injustice to some very good men in North Carolina, and I want to say that the men who are leading this crusade, while I believe in sanitary laws, I think the tendency of the times is to do injustice to the corporations, who, as Dr. Minor says, are not doing their duty by the hundreds of mill operatives in their employ. I am tolerably familiar with factory people. I am pretty familiar with the factory interests of North Carolina. I knew a great many of these people, who are now working in cotton mills, before they went into the mill work, and factory work, and I am here to make this statement,—that taking most of the people who have gone into the mill work and factory work, that most of the mill operatives are now living under better conditions than when they went into the mills. I do not say they ought to be allowed to use contaminated water, to stay in poorly ventilated houses, or work in dark, close rooms, but I can say that I know many families who were dying with tuberculosis before they went into the mill work, whose condition now is very much improved, since they are under the control of people who have their interests at heart, and their conditions surrounding them are better, more sanitary, and they are a healthier and happier people. We have some mills and some factory people in my town, Davidson. They are nice, respectable people. They do not live in filth and dirt. They have not perfect houses—none of us have that, but they look after their homes and have clean houses. I have looked after these factory people, and I believe that if Dr. Minor could look about the factories here, he would change some of his remarks. You doctors are always wanting sanitary laws passed, but, in doing that, you sometimes create a sentiment that is likely to do injustice to these corporations.

By Dr. Faison: Dr. Lambeth said he wanted Dr. Minor to read his paper, so I could jump on him. I think Dr. Minor was smart enough to get in a glass house, and proclaim that he does not throw stones. I am glad, though, that Dr. Munroe said what he did about it, because I felt that it

was necessary for somebody who owned something to say what Dr. Munroe said about it. Dr. Munroe is one of the best doctors in North Carolina. He is also one of the most honest men in North Carolina and he means exactly what he said, and I agree with him. There is one thing that nobody has mentioned, and there is one habit that belongs to these mill people and store people, about whom you have said so much, that has not been mentioned. It is one of the habits that will tend to communicate tuberculosis to a degree almost equal to the spitting habit, and that is this accursed habit of kissing everybody you meet. I don't know where the habit came from. It was here when I came, and it will be here when I am gone. It is an abominable, filthy habit. I know it is very tempting for a young man to want to kiss a pretty young girl when he sees her, but I cannot understand why old people want to kiss each other. God sends the rain and sunshine and air, and these wash away and kill the tubercule bacilli, but when people spit who have tuberculosis, they are pretty slick if they don't leave some of the tubercular germs on their lips. Then they go and kiss somebody and this bacillus on their lips will find lodging somewhere else and will give somebody else tuberculosis. It may not have a serious effect the first time or the second time, but the third time it may put them in their grave. The kissing habit, next to the spitting habit, is the worst means of transmitting tuberculosis.

By Dr. Minor: Mr. President, Ladies and Gentlemen: The first gentleman who spoke put his finger on an existing evil, but he has not fingers enough to put them on all the faults existing. I left out the house problem, because I could not take up everything. I took up a nice little patch that needed attention. I hardly agree with him regarding the dreaded conditions surrounding the negro cook; he is right to some extent, but I think flies are probably the worst thing there. The ground is too large to cover everything, and I could not make it hopelessly large.

I think I saw the negro at the woodpile in Dr. Munroe's remarks. I cannot take up the double side of the child labor question. I know it is a big question, and there are many facts which have not yet been proven, and I have often thought that some of our poor, ignorant, mountain whites, in their ignorance, probably improve their conditions by bringing their families to the mill villages, but that does not lessen the fact that it is true that it is disastrous to the health of a child to put in long hours of work in mills. I said heartless corporations. I say that—Yes. I have known some men

who have taken an interest in their employees. But the mill men want dividends; they naturally want labor as cheap as they can get it, and a great many of them take little or no interest in the lives of their operatives and are only interested in making their mill pay. I am glad that Dr. Munroe and other mill men in the South are beginning to realize the conditions existing, and the necessity for improvement. I believe public sentiment here will force the landlords to do their duty by the people under their control.

Coming to my friend Dr. Faison: He asks us where the kissing habit arose. It seems to me it probably arose shortly after Mother Eve was taken from Adam's side. He was so lonely and she looked so pretty and so tempting that he kissed her. Dr. Faison is a brave man. He faces situations that I am afraid to tread upon. When I see a young man and a young maiden, strolling in the moonlight, dreaming dreams and telling that old sweet story, do you think I would have the temerity to go and tap the young lady on the shoulder and say "Do not let that young man kiss you; it is dangerous."

Has Dr. Faison never enjoyed a kiss? I recognize the danger, and in my book of Instructions to Patients, I say that it is an agreeable pastime, but until you are well, it is dangerous,—avoid it.

There are certain other ways of communicating tuberculosis to others, for instance, the eating utensils, and many other things, but I am a man long before I am a doctor, and I have sentimentality enough not to be ready to ban the kiss. It has given me much pleasure and happiness, and I know long after I am dead there will be young men and young maidens, strolling in the moonlight, dreaming dreams, and plighting their troth with a kiss. I know of nothing on God's earth that is sweeter.

One more thing; one more appeal to the people of Charlotte. I want you to feel that you are a part of this association. Take it to your homes, as a duty. Look around you and see the misery everywhere, and the necessity of helping to remedy this evil. The dollar you will pay to join this association is a very small sum, but you do not know the good it will do. You can give much more—give us your interest, your assistance. It is a good cause, a righteous cause, and every one of you who is worth a cent will be glad to help it along. The North Carolinians have always helped their people—their State. There were no soldiers in the war who were better cared for by the people of their State than the North Carolinians. You took care of your

people in war. Will you not take care of them in peace? Let us all take an interest in this great work, and make every effort possible to make it a success and thereby a great benefit to our people and our State.

Dr. Julian, Secretary: Reads telegram.

The Fight for Existence Between Germs and Man—More Practical Teaching of Physiology and Hygiene in the Public Schools Urgent.

(Gist of Dr. Paul Paquin's Lecture.)

The existence of infectious, contagious and parasitic diseases is due largely to the ignorance of man with regard to the laws of physiology and the rules of hygiene. Had we all sufficient fundamental knowledge of our structure, the faculties of our constituting parts, the nature and properties of bacterial and parasitic life, i.e., the life of the infinitely little among which we find disease germs and the life of more highly organized bodies that maintain their existence at the expense of other living organizations, transmissible maladies were soon very scarce.

If the school pupils of today were as thoroughly grounded on the principles underlying good health as they are on the various other subjects of the curriculum when they reach the ninth grade or the day of graduation, their generation would probably see the passing of many deadly affections which are today the terror of the homes, such as diphtheria, typhoid fever, scarlet fever, and tuberculosis. But alas! insufficient importance has ever been attached to this branch of public education. It has ever been considered secondary to the various topics necessary to understand in order to succeed in life. And yet what is life without health? What is material success when at the height of it, in wealth and glory, perhaps, your children, your wife, or your husband, or some others dear to your heart, are swept away into eternity by a plague which you might have prevented?

I take it, then, that the laws of health should be inculcated in the minds of the young as thoroughly as you inculcate reading, arithmetic, geography, history, and the other essential branches of elementary practical education. Indeed, I class the knowledge of practical hygiene as paramount. But, unfortunately, the study of physiology and hygiene in early life is appreciated by very few, and is distasteful to the vast majority. Why? Because, as a rule, these subjects are not taught in a manner to interest anybody. They are usually memory exercises, sometimes from text books more or less forbidding, uninteresting, dry, and too often faulty in their teach-

ings. On the other hand, it happens frequently that these subjects are forced upon teachers who know and care nothing about them. And again, it happens in many schools that the sciences of health are taught more or less technically to children who can barely write, far less understand.

This evening I shall attempt to present, by illustration chiefly, the nature of man's structure, forces, activities, and defenses against germs, and his relationship to germ life in general and disease germs in particular—all this to the end that I may, if possible, help those gathered here to throw a gleam of light on some of the dark problems of tuberculosis as it affects man. To do this I must proceed with very elementary propositions in order that I may reach the minds of those among us who may never have had the advantage of even a little learning on the natural laws of man himself or the unseen life of microbes all about him. This part may bore the physicians, but I trust they will bear with me a few moments, for I feel that the illustrations to follow will grant information to many which could scarcely be taught by mere lecturing. Furthermore, I also beg the indulgence of the scientific minds present for the use of very commonplace terms in my explanations, and for any failure to go deeply or technically or even to attempt any special elucidation of certain scientific questions which will naturally come to their minds. My first purpose is to demonstrate certain truths and facts to the end that they may arouse interest and procure a working basis for practical hygiene; my second aim is to give an idea of graphic teaching of hygiene by the use of illustrations, as all public schools could readily do.

It was suggested today by a learned physician that we are not here to discuss the etiology or pathology of disease, but to teach practical means to arrest tuberculosis. I respectfully submit that a certain amount of information as to the whys and wherefores concerning the nature of the White Plague is necessary to arouse interest about it in the minds of those occupied with other problems of life than disease. Such information may do no more than satisfy some curiosity on the points of the appearance of germs, how they destroy the organs of man, how they kill, but that much may open the lay mind to further inquiry. Indeed, I consider it very important to pursue at least one line of our educational campaign against tuberculosis by beginning at the very bottom of the organization of man, and the study of his invisible enemies, forever ready to devour him where opportunity offers. Not only would such instruction be useful for the consideration of personal-

domestic and public measures of hygiene by the laity, but would tend to dispel the unwarranted growing feeling of alarm which in some quarters the unusual activity of the last twenty years has bred, and which the energetic work of the hour is possibly increasing, among those who are not sufficiently informed.

Besides, it might tend also, perhaps, to make those physicians think who have lagged so far behind the procession of enlightened civilization led by the advanced profession, that they have lost sight of everything, save the medical degree permitting them to place boulders in the path of the great unselfish movement of the anti-tuberculosis crusade for the health and happiness and life of the people.

Here comes the exhibits. No notes available about the pictures. Take note carefully of what is said. For headings to each section of slide exhibition see following page. Report of the explanations cannot be made with any degree of accuracy.

Topics of the Stereopticon Illustrations.

- A.—Explanation.—Inasmuch as knowledge of physiology and hygiene is not general, some elementary questions necessary to be reviewed briefly.
 - B.—Man's structure and cellular faculties.
 - C.—Bacterial life in general.
Germ life in particular.
 - D.—Disease germs in particular.
 - E.—The specific germ of tuberculosis and its complicators.
 - F.—How it acts; nature reacts.
Lesions.
 - G.—Conditions favoring tuberculosis and its transmission.
 - H.—Death rate.
 - I.—Outdoor life.
 - J.—Better teaching of physiology and hygiene in the schools.
- Meeting adjourns.

FOURTH SESSION.

Wednesday Morning, Jan. 13th.

Meeting called to order at 10:20 A. M., in Assembly Hall of Selwyn Hotel, by President Dunn.

President: I have tried to keep my promise to open this meeting at 9:20 this morning. On yesterday's program there were two or three papers that were not read. I wish to say that those papers were missed because of conditions over which the gentlemen had no control. Trains were late and did not make connections, and where trains were late we decided that those gentlemen who had missed the opportunity to read their papers should have the opportunity this morning to read them. If on the other hand, they were merely careless

and didn't get here, they have lost the opportunity to read the papers, and will have to come down to the foot of the class again. I see Dr. McBrayer is here. The first paper then of the morning will be the paper on "The Instruction of School Children in North Carolina in the Hygiene of Tuberculosis," by Dr. L. B. McBrayer, of Asheville.

DR. M'BRAYER.

Mr. President and Gentlemen:

I will have to apologize to the the President of the Society because I haven't my paper with me, and if my remarks are not quite as connected as they would be in the paper, I trust, if they are sufficiently interesting, that you will look over them in the proceedings.

It seems to me that if we are in earnest about the diffusion of knowledge of the prevention of tuberculosis, and in the title of my paper, of other infectious diseases, because they should go along together in the public schools, that we have no medium the equal of the public schools in North Carolina for the dissemination of that information. In the city of Asheville we have five thousand school children in attendance upon our public schools, by reason of a compulsory educational law. In the city of Charlotte you have nine thousand children of school age, and I have no doubt that every one of them is in your public schools today, not because of a compulsory educational law, but because of the Charlotte spirit.

In the State of North Carolina we have one hundred and fifteen thousand school children in school every day during four to nine months. Then this gives you a great audience. I have attended some lectures by medical men on this subject, supposed to be given before the school children and the public, and they are good. I am in favor of it. It ought to be continued. But I calculate according to the attendance, on the evening on which I listened to the lecture of an honorable member of your Society, that it would require four thousand medical men in the State of North Carolina giving lectures in order to reach the same number of people that you would reach through the school children in one day.

Now, I doubt very seriously if we have the men or the means,—the men who could give their time to this. Then in the public schools this comes not only one day in the year, but it comes every day during the school term, or two or three times a week, as they hear their recitations in physiology.

Now, there are some serious defects in the teaching of physiology in the public schools, which I wish to mention. In the curriculum, if you will look at the title of

the books, you will notice it is put down as "Physiology and Hygiene." That is a misnomer. The books should be entitled "Anatomy and Physiology," and it should be put down in the curriculum as "Anatomy and Physiology." I have had occasion in the last eighteen months or two years to look over the text books on so-called Physiology and Hygiene that are used in our public schools, and I am very frank to say that as text books on Anatomy and Physiology they are all right. They certainly teach as much anatomy and physiology as a student of that advancement has any right to be tackling, but when it comes to the subject of hygiene, they are as dumb as an oyster. I looked through one system of books, and the only time that tuberculosis was mentioned was one lone picture of the tubercle bacilli, with not a word of comment. Does that teach prevention of tuberculosis? It seems that the idea of the prevention of other infectious diseases had never even entered the mind of the writer of the book.

Now, I submit that the amount of anatomy and physiology that a child learns in school isn't worth very much. My boy is now at Wake Forest, and I expect that he will study medicine, and when he was in our public schools I told him that I didn't care for him to fool with the book they had on anatomy and physiology and to skip it entirely. I know another doctor in Asheville who did the same thing. They are emphasizing the thing that doesn't amount to a hill of beans, and leaving undone the only salvation of the people.

In order to diffuse this information through the public schools, we must depend upon the teachers. I would like to pass a eulogy upon the public school teachers of North Carolina. They are deserving of a far greater eulogy than I have the ability to deliver, but this is not the time nor the place for a eulogy of our public school teachers. Suffice it to say that a more loyal, self-sacrificing, devoted, under-paid profession does not exist in our State or any other State,—unless perchance it may be the poor doctor. (Applause.) However, they are and they have always been willing,—not only willing but anxious,—to do their full duty, and if they are not doing their full duty along this line, it is not their fault. We should keep in touch with the teachers. They should have lectures, and I don't mean lectures that are intended mostly to make the lecturer look large and august and learned in their eyes; but at at their Teachers' Assemblies, in the county teachers' meetings, in the meetings of the various teachers of the graded schools, they should have lectures on this subject and be

impressed with the importance of it. That doesn't go very far. After they have seen their duty, I will guarantee there isn't a school teacher in the State of North Carolina or anywhere else but what will live up to that duty.

Then the text book comes in for consideration. What is the trouble with the text books? Whose fault is it? It isn't the fault of the publisher. The publisher will give you anything in the world you want from a Bible to a book on infidelity. They stop at nothing. If the people want a book, they can get it. I call you to witness that only a few years ago,—I thought it was only five or six, but am told it was more,—there was a clamor made in this State that the text books on anatomy and physiology that are taught in the public schools in this State, should stress prohibition, temperance. By temperance of course the prohibitionist means the abstaining from drinking liquor; nothing else, no other form of temperance dare come into the question; but there was a clamor made for that, and immediately the text books on anatomy and physiology, which they called text books on physiology and hygiene, came out with instructions on the importance of not using alcoholic liquors, that would please, but exult the most rabid prohibitionist of this latter day, and it is there yet and is being taught in our public schools all the time.

A year or more ago when our State School Book Commission was going to adopt a new system of books, a few gentlemen requested that they require the successful bidder on the books on anatomy and physiology, or physiology and hygiene, to add a chapter on the Prevention of Tuberculosis. There was no objection whatever to it. After the book had been adopted,—the book was already printed,—the publishers very willingly added a chapter on the prevention of tuberculosis, and that is being taught in Vol. 2, or Book 2, of Lippincott's series on Physiology and Hygiene, in the public schools of North Carolina today, and has received favorable comment from many States, and such chapters as that ought to be prepared on all the infectious diseases. Of course, that could be improved upon greatly, because it was prepared very hurriedly, but such chapters as that on all the infectious diseases and contagious diseases. For instance, small pox; if the children were taught the importance of vaccination and what it prevents, we wouldn't have a terrible furor every time we want to have people vaccinated. It would come as a matter of course; they would come up and want to be vaccinated.

We reach a vast number of people through

these children. They go to their homes, and tell their pa and ma, the grown folks, what they have learned at school, so as a matter of fact we reach practically every citizen of our State.

Then if the publishers are willing, whose fault is it that we haven't got proper school books on this subject? It must be ours, the fault of the physician, whose duty it is to keep the people posted along this line. Now, then, if this Society for the Prevention of Tuberculosis has any cause for existence, if there is any reason why we are here, I call upon you gentlemen to get down to the most practical ideas possible. I call upon you to appoint a committee to look after this teaching of the prevention of tuberculosis and other infectious diseases in the public schools, to look after the text books on physiology and hygiene, and see that they ring true, see that they give the children an idea of how to prevent these diseases and the diseases that are preventable, see that they go into the public schools, see that the teachers are instructed; that they are put wise, so to speak. Superintendent Joyner is probably one of the best Superintendents of Public Instruction we have ever had. His sympathies are with us. I have had some correspondence with him, and he is ready to aid us in every possible. He was anxious to be here today, but owing to the fact that the legislature requires a good deal of wet nursing, he felt it was his duty to stay with them and let them have a little pap. If we will see to it that the text books are properly prepared and give the proper information, there is no doubt but that in a short time the knowledge of the prevention of disease will cover our beautiful State as the waters cover the sea. May God and the doctors and the public school teachers speed the day!

(Applause.)

Dr. R. H. Lewis: I want to express my appreciation of what Dr. McBrayer has said. It goes without saying, of course, that the instruction of the people is one avenue, the instruction of the school children is one of the principal avenues by which we can reach the people of the State. As the twig is bent, so is the tree inclined, and if we can start the children right, it will have an influence throughout life. I agree entirely with what Dr. McBrayer has said in regard to the inefficiency of the books we have on hygiene, and I have thought if we could have a book on hygiene suitable for the children, it would be of very great benefit to the children and to the State. As you will remember, I suggested on yesterday that if some physician of the State could prepare a text book suited to the public schools, I have no doubt

but that the committee on the selection of text books for the public schools would in all probability adopt that book, and that it would inure to the interest of the physician and to the benefit of the State, and I hope that some of our patriotic physician will set to work and prepare such a book. Now, as Dr. McBrayer says, we will have to reach the people through the teachers. The teacher must be taught. That is the first thing, and it seems to us that our State institutions, where the teachers are trained, should require instruction in hygiene, that all persons who intend to teach in the public schools should take a course in hygiene, and as we have a great many public school teachers who do not attend or can not attend those institutions, I think that if we can secure the proper text book, it would be advisable to inform them of the fact that this book was obtainable at such and such a price, and when they stood their examinations for positions as teachers in the public schools, they would be examined upon that book and would be expected to teach it during the session. A lecture, of course, is helpful, but that is temporary, only one time; it makes a little impression for the moment, but is forgotten. It must be line upon line and precept upon precept, and the teacher should keep everlastingly at it, and it should be certainly a matter for once a week if not oftener. I believe that unquestionably great good can be accomplished by that method.

Mr. President, while I am on my feet, if you will consider it in order for me to say a word, I would like to say to the Association that we have been greatly honored by the appointment on the part of the General Assembly of a Committee to attend our session. (Applause.) We have with us Dr. Gordon, who, as you know, has been one of the members of the General Assembly as well as one of our leading physicians with us, and Dr. Bolton, who is a new member but first-class timber, and Chairman of the Committee on Health in the House of Representatives. These gentlemen, I am happy to say, are now with us. We feel greatly honored and complimented by their coming, and I move that the privileges of the floor as well as a cordial welcome be extended them.

Dr. Gordon: Just before we hear from Dr. Gordon, I want to say that we have official notice this morning that this committee is with us, and I have asked the President privately to make it a special order at this time that we hear from this committee, and after we hear from them, that the President appoint a special committee to draft certain ideas and to confer

with the Legislative Committee and report back to the house. I would move that the President appoint this Committee and that there shall be no discussions in the general body until after the report of that special committee. There are a great many reasons why there should be no discussions until after the committee reports. I want to say that I have asked Dr. Dunn to place Dr. Faison on the committee, and I also ask that Dr. Faison will be in full fellowship and he can say anything he chooses in that committee. (Laughter.)

Dr. Faison: Mr. Chairman, before we tender the floor, already extended to Dr. Gordon, let us get through with the discussion of this paper, and in the discussion of that paper I wanted to say something just now.

Dr. Julian: I move that it be a special order after the discussion of this paper.

Dr. Faison: I second that motion.

President: Gentlemen, you have heard the motion, and I will entertain the motion at this point, because I consider it of sufficient importance to interrupt any discussion when the Government of the State of North Carolina has honored this Association by sending a special delegation to our meeting, and I would ask all in favor of that motion to signify it by rising.

Voted.

President: I consider the motion unanimously carried, and I want to say to this Committee from the State Government, as President of this Association, that we feel very highly honored, indeed, that you should have shown us this honor and this courtesy, and we appreciate it more than we can tell you, and as President of this Association I extend to you the full privileges of the floor during our stay here, and we trust you will like us.

Dr. Julian: Mr. President, I also move that the courtesies of the floor be extended to all persons, and especially to Dr. Winslow, of Baltimore.

Voted.

President: We will proceed to the discussion of Dr. McBrayer's paper. We have lots of business and lots of papers for to-day. I am going to hold to the rule; papers will be allowed fifteen minutes for reading, and discussions will be limited absolutely to five minutes, or we will not get through. I hope we will have lots of discussion and that we will not get through, but I hope the time will be taken up with discussions and five minutes discussions. We will proceed to the discussion of Dr. McBrayer's paper.

Dr. Faison: Five minutes is long enough for anybody to tell all he knows, anyway, and I can tell more than I know

in five minutes. I was delighted to hear Dr. McBrayer, and I preferred to hear him make his talk rather than to read a paper. In the start I want to say to the members that have come here from the Legislature, that it is in keeping with what I said in my paper yesterday, that the Legislature of North Carolina stands ready and willing to do whatever the people of North Carolina demand for their interests. (Applause.) I believed it when I sat at midnight and wrote these words, and I believe it now more than I did then. The State of North Carolina means to do what her people demand, and all you have got to do is to go right in and ask for things like men that have sense, and the Legislature of North Carolina will do it. Therefore, when we go to them and ask them to do what will protect the people of North Carolina against death and devastation, they are going to do it. It isn't going to take much money, and if it does take money, get the money. That is the idea. If Dr. Gordon can not get the money, keep going and keep knocking at the door until he does get the money. He has got to have the money. Now, I intended to talk of money and men. Dr. McBrayer spoke about the fact that you can not have those lectures because you haven't money. You do not need money, and you have the men. Take this town, take Asheville. They have Dr. McBrayer, and Dr. Minor. You can go to those teachers there, and if you have not the sort of stuff in you to go and tell those teachers what to do, you haven't got the stuff in you that I think you ought to have. We have doctors in Charlotte that can go and tell the teachers, and it will not cost. I am willing to go. I have studied hygiene. I have lectured on hygiene. I want to say to you that it is the hardest study that ever came across my pathway, but you can get it, and you can study it, and you can tell these teachers, and you can have it fixed so that you can have these teachers come together once a week, and there are plenty of doctors in Charlotte and in any corporate town in the State, and if they don't know how, put it up to them and make them know how. There is where you get your men and they don't cost a cent. If you want to go through your teachers, that is a good way to go. You can do it. There is no use talking about you can't do anything. If a man wants to do something, he can do it. There is no trouble about that. Now, about the text books. I have never seen the text books, have never read them, but we can get a text book. There are plenty of men that could write text books on this line. We can get the text book, and, as Dr.

Lewis said, the man who can write the text book can put the shekels in his pocket. There is no doubt about it. There are too many men hunting money, and it is an easy way to get it. Any of you can go and get it, and the first man to the trough drinks the water. Now, Dr. McBrayer said one little thing that I really wish he had not said—maybe it is what I would have done—and that is when his child was at the graded school and they were studying certain things, advised him not to take it. Just stop and think what that meant. Suppose I would tell my boy in the graded school not to study this book, and he gets up before the teacher and says, "My father is a doctor and he told me not to study this book," ninety-nine out of every hundred children there would say, "The doctor did not want his boy to study this book, and I am not going to study it either." I know children, and I think the doctor made a mistake. A doctor sends his children to school and wants to hold up for these things. If he didn't get much, it wouldn't hurt him. He is like some of these lawyers who run for office; they say, "I aint lawyer enough to hurt." (Laughter.) He wouldn't get enough to hurt him. There are some things, though, that you might advise him to study in these schools when you are going to make a doctor out of him, and I took that advice as a medical man, and that was two books, and when I put my boy in college, I made this restriction: "If you don't teach these two books for four years, my boy don't go to your school." One of them was the Bible, and the other was chemistry. (Applause.) They said, "Oh, we don't do that." I said, "Well, then, you don't get my boy." If you don't get the Bible into them when they are little, you don't get it into them. They agreed to do it, and for four long years at Davidson College, my boy studied Bible and chemistry every day, and when he was at Harvard he studied it, and when he was put on his examination for chemistry, they said, "Young man, where did you get your chemistry, and who taught you?" That is what it means. It was not only the standing, but the time passed in it, and he got it. That is what I am talking about. Now, in these graded schools, it is in the right direction for this education, it is the commencing point or beginning, as I began yesterday with a new born baby to show how to protect that child against tuberculosis until it grew up, to be ninety years old, if he wants to live that long, and he can do it. People are not living here as they ought to be living, and they are not as big as they ought to be, because they don't know how to live. These little finicky men don't know how to live,

and the folks that raised them didn't know how to grow them. Dr. McBrayer's parents knew how to grow him, or he had sense enough to go along and get it (laughter and applause), and I was in the same pasture with him. You don't know how to teach them. There is no need having these little fellows, these little dwarfish men, and these little women that never grow big enough to get married. There is no need of it, if the fathers and mothers would do as Dr. Lewis said in his paper last night. Men raise big horses and fine cows, and there is no use of having little people. If you could disseminate the truth in Dr. Lewis' paper into the human race, this race in four generations would be a race of giants, there would be no dwarfed men, and if Dr. Lewis lived at that time he would find a few healthy men and women that he says he doesn't find now. As I said then, he was looking for base ball players—I mean foot ball players—anybody can play base ball, but most anybody can't play foot ball. Coming back to this kitchen question in the graded schools, as I talked about last night, when you look at Dr. Minor, you know he is a moon dreamer. You know that he walked under the apple blossoms and he would kiss all the women who came about. (Laughter.) But, gentlemen, what I intended to put into that last night, I am absolutely convinced that I am right, and there is not a one of you but that would believe as I do if you saw a snaggle-toothed negro kiss that baby in the mouth. I stand here to say that kissing is wrong. I stand here to defend that question against all comers. I might have stolen a kiss when I was young, but that wouldn't make it right. I am speaking from a medical standpoint and not from a moon-dreamer's standpoint.

Dr. Minor: I do not believe that I can again use up my friend, Dr. Faison, on the subject of kissing, as I trust I did last night. I had the audience with me, and in the justice of my remarks, and I will not again go into it. A wise man has said, "Give me the children and I care not what you do with the grown people." Gentlemen, give us the children. That is where we should begin. What is learned at our mother's knee, what is learned at our school, that is the fundamental basis of all our knowledge. Let that fundamental basis be laid right, and we need not fear for the future. We owe all honor to Dr. McBrayer. He was the originator or designer of teaching children in this line in the schools, and I think the work done in this direction is most admirable. There is no question about that. But we have here with us this legislative committee. We want

to show them what these intelligent doctors already know, and emphasize to them the fact. If such teaching is wise, teach the young men and women, teach the old men and women, teach through and through. The whole trick of this movement is teaching, the whole of all movements is teaching. Teaching is positive; passing laws is not positive. I differ from my friend Dr. Faison. I say laws are useful when you have cultivated a proper public sentiment, but go to the Legislature first for reasonable funds to teach through the schools, through the papers, through organizations, through leaflets, as I suggested last night. Let us teach, teach, teach. Then after two, four, six years,—I do not know how long, I do not care how long, of such teaching as that, and then public sentiment, strong over the State will come up to the legislature, they will feel the need, they will have time to digest what laws are needed, and give us laws backed by public sentiment, laws that will be what we need. We have a grand fight before us. The Old North State is never behind other States when her eyes are opened, and when you once convince our people, of the legislators are simply the chosen representatives,—they are people, too,—they are not a separate organization, when you convince our people what is needed, then the money will come, the laws will come, and we will get in North Carolina what we want to get, the suppression of tuberculosis.

Dr. Julian: I want to thank Dr. McBrayer for his address this morning, though I did not have the privilege of remaining in the hall at the time. I have a rather tender feeling for Dr. McBrayer, as he was a schoolmate of mine, and it was at my urgent request that he is here this morning. I want to say in regard to the remarks of Dr. Faison that the idea of the two important branches, the Bible and chemistry, meets my approbation. He is a good Presbyterian; I am not, but I have a daughter in your Presbyterian College. I know that Presbyterians always have Bibles, but I want them to give us a little hygiene with their Bibles.

Dr. Minor: May I have the rest of my five minutes? Dr. McBrayer very wisely said that we must teach the teachers. I agree with him in the impossibility all over the State of getting as many satisfactory teachers of these teachers as are necessary. I believe the suggestion that teachers should be taught in the Normal School is much more practicable. We all realize that a fact, though well put as they are in some books for children, will not reach them until rationally explained. You can put the best kind of text book on hygiene in

the hands of children, and it will be Greek to them. If you will inquire of children what they have learned at school, you will be horrified to find the absolutely upside down, cranky ideas they will get. The teacher is fully as important as the text book, and I hope in this movement that we will take great pains to see that the teachers shall be taught. Until the teachers are taught, are interested, are enthused, until they know the reason why things should be done, it won't be any use. The basis of all intelligent teaching I have ever heard of is the reason for things. A fact is no use; but the fact and why it is so, the reason why the thing must be, and then you have your teachers so they can explain these facts, and then put into their hands the text book, as Dr. McBrayer has suggested, they will set to work and get the results you desire. May we ask that these gentlemen, the legislative committee and all these North Carolina doctors, express their opinions, and not leave it all to two loquacious people like Faison and myself! Don't let anybody be a sponge. Give out and not simply take in. Let every one express his ideas, so the legislature can know what we are thinking and know what we want.

Dr. Julian: We have with us Rev. Mr. Kesler, the Superintendent of the Baptist Orphanage at Thomasville. I would like for him to discuss this paper. (Applause.)

Mr. Kesler: Mr. President, I appreciate the courtesy, I am sure, and I want to say, there is no theme since I have been able to read that has been more interesting to me than hygiene. I do not know why I didn't become a doctor. It is thrillingly interesting, and I want to say further, there is no theme more easily taught than this,—I believe. I think it is one of the easiest things in the world introduced into the school at regular periods, or incidentally. I take advantage of it myself, not in the class room, but in a public way. I think that the attention of the graded schools,—I don't think they have been mentioned,—it does seem to me that the superintendent of the graded schools has the situation in hand in any city or in the high school in the country, and it seems to me if they would all take hold of this thing intelligently,—and if they take hold of it at all they will take hold intelligently,—they will make it go, I am sure. The text books are defective, and they ought to be remedied, but it seems to me, text books or no text books, it can be done. It is in the air. All the people we meet are talking about it. The magazines are full of it. I can't see how an intelligent student of to-day can fail to find information enough to make it interesting in the school room. It is a very interest-

ing subject, and I am trying in our institution to make a very important department. They are ventilated almost every day of their lives. When I find a teacher that won't do it, I go in and leave orders,—and of course they are obeyed. I have seen a great improvement, certainly in one respect in the freedom from pneumonia. We had an epidemic several years ago. I believe it was largely due,—and Dr. Julian will bear me out in this,—to the lack of ventilation. We had sixty-six cases. They were in a hot box, and they and the pneumococci were all in there together. We opened up the thing, and I have insisted on it above all things. We do not exactly let a child sleep with his head in the window, but we certainly let him have the fresh air. It seems to me the superintendents of our graded schools have the situation in hand, text books or no text books, doctors or no doctors. It is not confined to the doctors. The laity, everybody ought to know these things, and the day is at hand when they should know them. (Applause.)

Dr. Minor: I would suggest in view of his knowledge of the pneumococci that the honorable superintendent be made an M. D.

President: If there is no further discussion on this paper, I will ask Dr. McBrayer to close it.

Dr. McBrayer: Mr. President, Dr. Minor's remarks in regard to North Carolina always coming up appeal to me immensely. I am proud that I was born in North Carolina. I am proud that I live in North Carolina. We have got the best people on the earth. North Carolina may be a little slow getting there, but she always gets there ahead. Why, the able editor of the Charlotte Observer would even make people believe that the Declaration of Independence was signed right here in your city. (Applause.) An American was once touring the old country, and he was considerably stuck on America. They would show him this and that and the other great thing across the water, and he would say, "Oh, America can beat that." Finally, they thought they would show him a volcano, and they took him up and had him look into the crater of Vesuvius, and they said, "You can't beat that in America." He said, "No, we haven't a volcano; but we have got a little branch over there called Niagara that we could pour into that and put it out in two minutes,—America is always ahead." They were not satisfied, so they took him out one night, and they wined him and dined him, and he got a little rickety in his knees, and they took him down into the Parthenon, and down into the basement where they deify their saints, where the walls are all lined with skeletons

and the floor covered with skulls. He was in a stupor from alcohol, and they left him there alone. About noon the next day he waked up, and looking around, he said, "Oh, oh! this must be the resurrection morning, and I am the first man up! America is always ahead!" (Laughter and applause.) So North Carolina is always ahead. In regard to Dr. Faison, he only discussed the paper for two minutes. I am sorry as able a speaker as he would go crazy over the subject of kissing and not confine himself to the paper. He spoke of men and money and emphasized the point I made exactly, that we should see to it that the public school teachers receive lectures, and we have got plenty of men to give them, but we haven't got the money. Our men in North Carolina should go to the public schools in the State and teach hygiene. That is the point I made,—that we must teach the teacher, but when we have done that we have not done our full duty. The point in regard to having the subject of hygiene thoroughly taught in the Normal School is well taken, indeed; exceedingly well taken. There was one thing that I failed to get above my sub-conscious memory, in the idea that this must be done, we must teach line upon line, precept upon precept, and keep at it, and that is that we should have a health day in our public schools each year. We have a Washington day, a Lee and Jackson day, and an Arbor day, and Uncle Remus day. That is all right, but we ought to have a Health day, too; and have appropriate exercises, something that will interest the children.

Dr. Lewis: The Superintendent of Public Instruction proposes to have a Health Week.

Dr. McBrayer: I was not so informed. That idea had occurred to me, and I am glad to know it. The idea is we have got to keep on drilling it in, drilling it in. If you hit a man once, he may not feel it, but if you keep hitting him in the same place, he will get sore and feel it every time you touch him. If we keep drilling this thing in, it will filter through, and the whole State of North Carolina will become educated upon the subject; but to my mind the text book,—you may say what you please about your magazines, Dr. Kesler,—that is all right, but everybody doesn't read them,—and it is in the air; that is true, Dr. Kesler, and you have got it, and I am glad you have, and others have got it; but unless it is in that text book and the children are required to hold it in their hands and study it, and the teacher must explain and impart it to them, it will not be impressed upon them as it ought to be. The other things are well and proper. I wouldn't do away with a single one of them, but to my mind

the greatest thing that we need at this time is a proper text book to put in the hands of the children. Then with all these other things being driven into the same point, the knowledge will be disseminated and disseminated thoroughly. I appreciate very much the discussion this paper has received, and I trust that the ideas have only begun to be disseminated and used. (Applause.)

Dr. Julian: Mr. President, I move that a special committee of seven be appointed in regard to legislation on public health and sanitation in North Carolina to confer with the legislative committee here today.

Dr. Minor: I second that motion.

President: You have heard the motion. If there is no discussion, I will put the question. It is moved and seconded that a committee of seven be appointed on public health and sanitation to confer with the legislative committee who have honored us today. All in favor of that motion will signify it by saying "Aye."

Voted.

President: I will appoint upon that committee Dr. Lewis, Dr. Highsmith, Dr. Hays, Dr. Faison, Dr. Minor and Dr. Julian.

Dr. Julian: The president is a very modest man. I had asked him to serve upon the committee. All in favor of placing Dr. Dunn on the committee, as chairman, make it known by saying "Aye."

Voted.

President: I am going to stick to my promise. I just couldn't stop Dr. Faison, especially when he got after Dr. Minor. If it had been anybody else, I would have stopped him. The next paper will be a "History of and Efforts Against Tuberculosis," by Dr. C. N. Peeler, of Charlotte.

The History of and Efforts Against Tuberculosis.

By Dr. C. N. Peeler, Charlotte, N. C.

From the earliest historical records consumption has been a foe of mankind, and at present it is the greatest enemy of the human race. It claims more victims annually and exceeds any other disease in the cost to society in civilized countries. In the United States in 1907 more people died of tuberculosis than the total number of men either killed in battle, or died of wounds and disease in camp during the whole of the four year's war between the States.

The earliest known records of the disease tell us that the Babylonians were familiar with it, the Egyptians also probably had come knowledge of the disease. References in the Bible written 1500 B. C. point to consumption as the one that Moses pronounced a curse for disobedience. Hippocrates about 400 B. C. was the first to give an intelli-

gent description of phthisis. He believed it to be curable in all stages, and that a change of residence was beneficial. At this early date it was a general belief among the Greeks that consumption was contagious. early date it was a general belief among the Greeks that consumption was contagious. Galen, in the 2nd century A. D., sent his patients to the Highlands of Phrygia for treatment. Other than the knowledge given by these men and their contemporaries there was nothing new added on the nature of tuberculosis for 1400 years, when anatomical study began.

Sylvius, in the year 1695, was the first to point out the connection between tuberculous nodules and phthisis. He thought the nodules of the lungs were enlarged lymph glands and the causes of enlargement were two in number, constitutional and local, the first affecting the nutrition of the lung, the second causing the ulceration. He gave a careful description of the symptoms and believed it to be contagious.

Bayle in 1803 studied the miliary tubercle in all its stages and classed it as a constitutional disease which depended upon a scrofulous nature. He was the first to recognize tubercles in other organs than the lungs, but said they were scrofulous in nature. Laennec in 1819 simplified the knowledge thus far gained and said that all phthisis is tuberculosis, and that scrofula is tuberculosis of the lymph glands. It was he who gave us the art of auscultation and accurately described the symptoms gained thereby. But it was left to Robert Koch, a health officer in a small German town, to positively identify the tubercle bacillus as the cause of tuberculosis. This was in 1882, and it was so complete in every detail that very little of importance has been added since that time.

From the time of Koch's brilliant discovery, or for the last twenty-five years, great progress has been made in the efforts against tuberculosis. At the beginning only a few men accepted Koch's solution of the cause, but they had the conviction of truth in their assertions, and men and women of influence were gradually enlisted in the warfare against this terrible disease. Societies began to spring up and in a short time civilization began to feel the influence of their efforts.

Gradually and quietly this crusade has been making progress. It has not been heralded by the sound of music nor by the clatter of arms, as was the one for the restoration of the Holy Sepulchre when a million souls marched under one banner. It has not come by the command of Kings nor the wield of the sword, but it has come by the investigations of the scientist and the dis-

semination of the knowledge gained by the philanthropist. The poor and rich alike are giving funds for carrying on the work, and States and towns in every civilized country are spending money for its advancement.

The first Society for the Prevention of Tuberculosis was organized in Philadelphia in 1893, only fifteen years ago. A similar one in Paris soon followed, and for a few years these two organizations were the only ones in the field. They sent literature to all parts of the world, and the French Society began the publication of a Journal on Tuberculosis, which has done a great deal to enlighten the world along scientific lines. Soon societies began to spring up everywhere, both in Europe and America, and wherever one was organized it attracted the attention and gained the support of the best citizenship. With the increase in the number of the societies the amount of literature likewise increased and new journals and new literature flooded the country with information on tuberculosis from every possible point of view. Countries, cities, and towns have their local organizations all vying with one another for the one main purpose of blotting out the Great White Plague.

In order that these organizations might do the most good it was early seen that some supervision would be necessary to keep the work within proper lines, and with this purpose in view the leaders in Europe met in Paris in 1898 and organized a Congress along international lines. The second Congress met at Berlin in 1899, the third at Naples in 1900, fourth at London in 1901, fifth at Paris in 1905, the sixth and last one at Washington in 1908.

At these gatherings the noted generals against the Great White Plague read papers and discussed the best means for the control of and for the decrease of the disease, its treatment in all phases, prophylactic, hygienic and therapeutic. The exhibits at the Congresses have been special features and a revelation to those who saw them. From the different countries of the world displays of the work were made and the manner in which it was done. The bacteriological and pathological exhibits demonstrated how the disease plays havoc with not only mankind but throughout the animal kingdom. For example, three birds were shown at Washington; one killed in the wild heather of Scotland, far from the haunts of men, a chimney-sweep and pigeon dwellers among men, and all three showed the miliary tubercles within and upon the pancreas and other organs of the abdominal cavity.

The points emphasized at the Washington Congress were that human and animal

tuberculosis must be regarded as the same, that the serum of today is useful for diagnosis, and that the important treatment consists of sunshine, fresh air, good food and rest with proper exercise. However, let us hope that the day is not far distant when the dreaded tubercle bacillus may be destroyed by the products of its own handiwork. It is no Utopian dream to say that tuberculosis can be materially decreased in its ravages and finally driven from the face of the earth, provided all modern knowledge can be disseminated and put into practice universally.

The United States probably surpasses any other country in the matter of general education on the subject of tuberculosis and the application of modern knowledge for the treatment of it. Current literature and free delivery have done much in educating the people about the nature of tuberculosis. This is a quick way of disseminating knowledge, but it is often inaccurate and just as often leads to false impressions. This is true as to the nature of tuberculosis. We have not yet recovered from the shock caused by the declaration that consumption can be communicated from person to person. It is the duty of every physician to educate the people in regard to the nature of phthisis, but along correct lines. Tuberculosis is a communicable infectious disease in that it is implanted by contact with a person who has the disease, or with a place or thing which has been in contact with a diseased person, but the contact can be made harmless through the intelligence of the parties concerned. Cornet says, "The consumptive in himself is almost harmless and becomes harmful only through bad habits." This harmfulness exists, and greatly so under present customs, but it can be nullified or greatly reduced by the observation of simple rules of which we are all more or less familiar; the importance of which is emphasized when we remember that a person with moderately advanced disease who expectorates from 60 to 120 c.c., or 2 to 4 ounces daily, throws off from one and one-half to four and one-third billions of tubercle bacilli in twenty-four hours. (Nuttall).

One important task before us at present is to teach every person the methods by which a consumptive can be made harmless to others. In order to do this the expectoration of every diseased person must be properly disposed of. It will be a happy day for society when the careless spitting of matter of every kind from the respiratory tract will be placed in the same category as the indiscriminate deposit of excreta, which has already been banished from modern civilization. The new ideas of disease must

be engrafted upon our social customs. People must be taught to look favorably upon the practices for the prevention of disease which have to do with expectorating. The person who uses a pocket sputum cup in public and openly practices measures for the prevention of disease should be looked upon with approval and not with scorn and contempt. As society now is, the person who follows practices that endanger every one about him but which are in harmony with social customs, is looked upon with approval.

Another point of importance at the present time is the proper disinfection of places and things which have been contaminated by infectious or contagious diseases. To do this the first thing necessary is the accurate registration of diseased persons. Men object to this for various reasons. [Of all things to be dreaded the most is a hidden foe]. This registration and disinfection is an extensive one and can best be regulated by governmental control. Both political parties had planks in their platforms committing themselves to the establishment of a Bureau of National Health. Dr. Reed, of Cincinnati, emphasized this point at the Washington Congress and put the physician on his guard to see that this pledge shall be carried out. We of the South should be especially interested along this line of sanitation, since our negro population is a menace because of the fact that they are very susceptible to the disease, and their methods of living and their tendency to shield and hide members who are suffering from any infectious disease; thereby increasing the dangers to the white race as well as the continuation of the infection in their midst.

Other subjects about which the public needs to be educated are ventilation, cleanliness, sanitary conditions of every kind, including the disinfection of railway and street cars, but above all, the most important point is the rendering of the diseased person harmless to society. Already New York, Pennsylvania, and perhaps some other States, have partial governmental control of their tuberculous patients, and other States are soon likely to follow. Our own State during the last legislature created a commission and appropriated a sum of money for the establishment of a State consumptive colony. It is important that the present legislature carry forward the work of the former body.

To sum up briefly:

1st. That tuberculosis has been a foe of mankind from the dawn of history.

2nd. That all the progress against the disease has been made in the last twenty-five years.

3rd. In order that the efforts against the

disease may be successful a general education of the people must be accomplished both in regard to social customs and sanitation.

4th. That governmental control is the proper method, knowing that the disease is our most dangerous foe warrants the passage of strict laws for its isolation if necessary and prevention.

5th. That if through the work of the medical profession this plague shall be blotted out they will have become the greatest of all benefactors of the human race.

Bibliography.

Osler's Modern Medicine, Vol. III.

Osler's Practice of Medicine.

Johns Hopkins Hospital Bulletin, Vol. 18, No. 197.

Southern Medical Journal, Vol. 2, No. 1.

(Dr. Julian said this was Dr. Nesbit, but think it must have been either Dr. Crowell or Dr. Badger, as it was not Dr. W. O. Nisbet, of Charlotte).

Dr. Nesbit.— (?) We have heard about educating the people, the work of educating the public school teachers has been brought prominently to the front, and of teaching the children, and practically every class with the exception of one class, and that is the real estate man, or the man who has a good deal of property to rent, who has tenant houses to rent. This subject has been neglected. For instance, the real estate man, or a man who has a good deal of property to rent, has a tenant in one of his houses, and that man knows there has been a tuberculosis patient in that house for two or three years, or four or five years, and he has moved out, and he wants to rent it. He rents that house, and says nothing to the party going into the house about the tuberculosis patient having been in there. The tenant will move in. His good wife will get an ounce of carbolic acid and will proceed to disinfect that house, and perhaps have lime sprinkled over the premises and in the back yard, and be careful to get it sprinkled everywhere except where it might do good. That is one point that I think should be given considerable attention. I know of a case in my neighborhood in this city where it occurred just that way. I went to a gentleman about it, because he owned a good deal of property there and I thought it would be to his interest, and as soon as I found it out I asked him if he knew of it, and he said yes, there had been fifty in there, but they had gotten some carbolic acid and had cleaned up the house and had thrown lime in there. I knew that tuberculosis patient had been in there three or four years. He moved to Gastonia, and I presume will infect some house over there.

Two families moved in this house. Both of them have children, from infants up to 15 years old.

Dr. Minor: The point to which the doctor refers is of importance. The cupidity of the property owner, the selfishness of the property owner, we all know, and it does lie within our power to some extent to overcome this. Laws can be passed and can be enforced whereby the house in which a sick patient has died,—not always, unfortunately, of tuberculosis,—must necessarily be promptly disinfected, not by the owner, but by the Board of Health, before any one else moves in, and if the Charlotte Board of Health has a proper law, if Smith or Jones or Brown moves out of that house while he was under restraint as a tuberculosis patient, then, as is done in New York, the Board of Health would go to that house and they would properly disinfect it, and I don't need to tell you, gentlemen, that with proper disinfection it can be made safe. The small cost should fall upon the property owner. This is a matter for city legislation, and I think that every doctor in this State ought to see that a law is passed of that type, so that a tuberculous person moving out of a house shall necessitate that house to be disinfected, and make it plain that doctors shall report those houses to the Board of Health. One thing in regard to Dr. Peeler's excellent paper,—I am glad he lays stress upon the disposition of the sputum. The committee desires to take up that as one of the objects of their special action in regard to sanitary conditions, especially in stores and workshops and factories in the State. We feel that the great working class, which is the back bone of the State, must be protected against themselves. As you know very well, it is the custom in stores for the clerks in stores and the workmen in shops, and cotton mill operatives, to spit on the floor and rub their foot over it. That is spreading tuberculosis all over the State, among our most valuable citizens, our workmen, and we are undertaking to plan a campaign against that by sending out leaflets to employers all over the State. One other thing the legislature can help us get is to help us with the finances so that these circulars can be circulated all over the State. This Association has no finances except \$1.00 apiece, and we have only about seventy-eight members, but the legislature can spend no money better than by giving us a reasonable appropriation to circulate this information broadcast over the land, to cultivate public opinion, so that every clerk in every store will know that cases have been infected in that way. The legislature could do no more useful than to help us in that fight.

Dr. Williams took the chair, and Dr. Dunn said:

Dr. Dunn: There is a point growing out of the discussion of this paper that I think cannot be emphasized too often, and that is the question of disinfecting. We have a meeting here at least partly composed of ladies. I think that this little affair of disinfecting and disinfectants, we put entirely too much faith in it as ordinarily carried out. The public and the doctor, I am sorry to say, alike have a child-like faith in disinfecting. They seem to have an idea that carbolic acid or some of those disinfectants, it works like that,—presto! everything is clean, all germs and everything gone. As I said in my address, I know of nothing that has been more responsible for more indecent habits than the use, or misuse, of disinfectants. Now, if we are going to fumigate after these people, don't let us tell the people to fumigate. Tell the doctors,—they are the only people that can fumigate and do it properly. It must be done properly, and if it is not to be done properly, don't do it at all. People go in and put their babies on the floor, with a feeling of pleasant security that everything is clean. Have I not seen those children thrown on the floor, pick up pieces of dirt and all that sort of thing. That is where our disinfecting did harm, ten times more harm than good. If we are going to fumigate, let us do it right, and put it into the hands of people who will do it right. Don't allow them to undertake to fumigate after cases have been in those places, but let nobody but the Board of Health do it and make the Board of Health do it. They burn something in the room, and presto! everything is as clean and pure as God made it in the first place, to hear them say. It is absolute nonsense. The stuff doesn't clean. We know it takes time for exposure, even under the most favorable conditions, to kill bacteria. Carbolic acid takes time and higher percentages than are ordinarily used, percentages that are absolutely dangerous in the hands of laymen who are ignorant of the danger of the poison. That is the point I want to emphasize again and again. Let them be used by specialists, by boards of health, and discourage the use of all of these disinfectants by laymen, because nine times out of ten it is done improperly, and it has been responsible for a feeling of false security, which is productive of harm.

Dr. Minor: In continuation of your remarks, I know you are heartily backing what I say when I state that the best disinfectant is the scrub brush. What the doctor said about a little lime or ounce of carbolic acid is very true. I want to say that our President is a very active member of

our Asheville board of health. Our practice is for the board of health, with men like Dr. Dunn on it, to go to the house and they take charge of that house and send their man there. They don't see that just formaldehyde vapor is used. Without its being steamed, it is no good. They see that the house is properly disinfected, and then a negro woman should go in with carbolic and hot water and brush, and it can be done properly. I heartily agree with what Dr. Dunn has said about the misuse of disinfectants, but the best disinfectant is the scrub brush, always followed by other intelligent things.

President: If there is no further discussion, Dr. Peeler will close the discussion.

Dr. Peeler: In regard to the fumigating, it is very important, as the custom is now when we have tubercle bacilli almost everywhere, and especially in dark corners in our huts, tenement houses, etc., but the point that I was driving at was to get to that position where we can render the patient harmless. Then the fumigating becomes worthless, because disease is the disseminator of disease. Counting five thousand tubercular patients in the State of two millions population, only one-fourth of one per cent. has infection, so it is very important that we take this one-fourth of one per cent. and render that harmless to society in order to protect the 1,995,000 other people. If we can't reach them by education, then my point is to come in with some governmental control. I want to emphasize that point a little bit. It was ruled out a while ago, but I want to bring it just a little farther. Education is a good thing for the 1,995,000, but ninety per cent. of those diseased persons, I should say, we can't reach by education. Education won't do that man any good, but we need something to force him to go along on sanitary lines, and that is the point I want to emphasize. We had an instance in the children of Israel, when God gave them the law to go by. Later they dispensed with the law, and now we have the Gospel to go by. It is the uneducated classes who are the ones we need to force. I would not detract one iota from the education of the children,—they are coming up, teach them those things—teach, teach, as the Doctor has said, but those ignorant ones that you can not teach, for there are some that you can not, then force them.

(Applause.)

President: The next paper is, "How Shall We, the Medical Profession, best Educate the Masses to Prevent Tuberculosis?"

By Dr. J. F. Highsmith.

How Shall We, the Medical Profession, Best Educate the Masses to Prevent Tuberculosis?

By Dr. J. F. Highsmith, Fayetteville, N. C., President North Carolina Medical Society.

Tuberculosis was likely known to the Egyptian physicians 1500 years before Christ. Hypocrates 460 to 376 B. C., gave an intelligent description of tuberculosis, and the celebrated Sylvius, 1400 years later, claimed there was a connection between tubercular nodules and tuberculosis.

From this time on down through the ages great scientist in our profession have labored in search of the microbe or true cause of tuberculosis. The masses being led to believe all the while the disease to be inherited, incurable, taking for its prey whomsoever it saw fit. And, as you know, the medical profession believed the same to be true until Robert Koch, a health officer in an obscure German town, in 1882, I believe it was, positively demonstrated the tubercle bacilli and its relations to tuberculosis.

Since this time it has been known that tuberculosis is due to micro-organisms, and the anti-tuberculosis struggle has been steadily waged by the medical profession among themselves. The time is now ripe and there is a growing demand that the people be educated relative to preventing the disease, and this education is, to a great extent, principally in our hands.

Great strides are being made along this line. Indeed, the International Congress on Tuberculosis, which met in Washington, D. C., in September of the year just gone by, with its 2000 delegates, representing every civilized nation in the world, was the greatest gathering in the interest of suffering humanity ever assembled in America. And how can this be other than true when we recall the fact that more than 150,000 deaths occur in this country alone every year from tuberculosis.

Now the question, how shall we, the medical profession, educate the masses to prevent tuberculosis. This is an undertaking of vital importance and on its answer rests the key-note to the situation.

In the first place the physician, in whatever sphere he is placed, let him be a general practitioner in the rural districts, let him be a surgeon, a specialist, or professor, if you please, he must feel and thoroughly realize the fact of the obligations due his profession, as an honest, conscientious man. This done he must begin his warfare against the dreaded disease at the cradle, in the home, if it be mansion, or hut where numbers crowd together, in the factories, in the school room, and, in fact, in every walk of life as he individually comes in contact with the dreaded disease, for it has no re-

spect of persons, some being more predisposed than others, but none iron-clad against the tubercles in some phase.

Much has been written pro and con concerning tuberculosis, but what we need now is a united action of the profession working in harmony to awaken the masses to a realization of the true nature of the disease, how it gains its entrance into the system, etc.

The ancient belief in the direct inheritance of the disease dies hard in spite of the weight of evidence against it, as a frequent source. The direct hereditary transmission of tuberculosis involves the transfer of the bacillus in one of several ways. First, from the father through the seminal fluid or by means of the spermatozoa. Second, from the mother through the ovum or placental blood. Since genito-urinary and milary tuberculosis are infrequent, and bacilli have not been found in the semen of ordinary pulmonary tuberculous patients the chances for paternal transmission are very small. The conception of an actual infection of the spermatozoa with the bacillus is out of the question from any facts which I can gain.

I claim then, that the child when it is born into the world is free from tuberculosis, but admit the fact that if either parent is the victim of tuberculosis the child inherits a predisposition to infection. It will have the suitable soil for the entrance of infection and the growth of the germ, but if the germ is not planted it will never grow. We may have the most fertile land suitable for the growth of the great staple, cotton, but if the seed are not planted and cultivated the staple will not grow.

So as I see it the most important work to us, the profession, is to prevent, in the first place, the entrance of the tubercle bacilli into the body of the new born child. This done and the public at large kept continually under fire in the line of education concerning the disease, it can be only a matter of time when the tuberculosis will be banished from the face of the earth.

The infection can enter in a thousand ways, but if the offspring is carefully watched from the time breath first enters its lungs, each day it is better protected, each year adds less likelihood of an infection and when it has reached adult life having passed through the individual stages of education, taught as a child its weakness, taught as a young girl, blushing into womanhood, her weakness. Taught to the young man behind the counter his weakness. This done when they have reached adult life their dangers of infection are at the minimum.

Yes, I admit these are hard lessons to

teach—they are. Cases are on record where consumptive midwives are supposed to have infected infants by blowing into their mouths to start respiration at birth. No mother who has tuberculosis should nurse her child. While inoculation experiments with the milk of consumptive mothers have been negative, yet breast fed infants can readily get the bacillus from sputum soiled fingers of the mother which are frequently in contact with the nipple or put into the infant's mouth. Next in importance are the fingers and toys of crawling infants frequently soiled, as they certainly must be in the dwelling of the consumptive poor, from infected dirt of the floor, as well as from the clothing, and especially the handkerchief of the consumptive mother or nurse.

It is hard to separate the mother from the child—this we would do had the mother been exposed to scarlet fever or smallpox, but with tuberculosis which means much more, it has been neglected.

I believe if the obstetrician would outline to the mother, to the father, to the nurse the gravity of the situation and the danger to the offspring, tell them that the sputum brought into the house on shoes and trailing garments, and by pets, especially dogs which habitually lie upon the sidewalks and door steps, the act of kissing the infant, and many other ways too numerous to mention, infection would undoubtedly be much less likely to occur.

As this child grows up it must be subjected to environments and surroundings which only tone its resisting powers to tuberculosis. Should the child have deep-seated colds, la grippe, pneumonia, it must be carefully watched and guarded, or if they should be the subject of any acute disease which lets down their resisting powers, especially during the convalescent stages, they should be especially warned and guarded until their constitutional condition shows thrift and activity.

The girl with this predisposition must be advised and carefully watched at the stage of puberty until her organs are in line and have developed into regular functions. She should indulge in outdoor life, avoid overwork, late hours, badly ventilated halls, becoming too warm, for instance, in a dance hall and going out improperly clad. Practice physical culture, deep inhalation, and avoid any occupation, as far as possible, which tends to over-tax her physique. When it comes to the question of matrimony I strike a hard proposition. For her own good it is safest for her not to marry, for if she should bear children and nurse them she becomes much more susceptible to infection. While on the other hand should she marry she must be advised to

marry a man strong, with no inherited tubercular tendency.

The young man must be advised to seek employment in out-door life, to avoid dissipation and excesses, and to remember when he has reached the matrimonial stage that it is best and wisest for him to marry one who has not that inherited tendency.

The second step of vital importance for the profession and for the patient is the early diagnosis of tuberculosis. Each case coming under the physician's jurisdiction, where a tendency to tuberculosis is possible, should be carefully diagnosed, which is an easy thing to do at the present time. This done early and the fight against the disease begun and kept persistently in action until the last bacillus has been captured by proper treatment our percentage of absolute cures would be greatly increased.

I believe that he who diagnoses well and early will cure well and sure, but he must not close his lips and let the case run on and on, but warn the patient of his danger and advise him accordingly. If it means that the young professional man must pursue other lines, or if it means that the mother must isolate herself, in a way, in her home, or that the young lady shall be advised to postpone her marriage indefinitely, then this advice must come from us with force and earnestness, true to our profession, true to ourselves, and to our patients. In the words of Shakespeare: "This above all, To thine own self be true; And it must follow as the night the day, Thou canst not then be false to any man."

This done we are standing on a firm foundation ready to join hand in hand with other States, the whole United States, under the banner of the A. M. A., and at last with foreign countries, to organize and maintain Public Health Bureaus. In this effort we, as physicians, must lead, as we always have in the past, but our work can be of little avail except it be supported by an educated public opinion, and by the cooperation of legislators, lawyers, ministers, teachers and intelligent citizens generally. If the various professional, scientific, and philanthropic associations were thoroughly enthused and brought together as one to work against tuberculosis untold results would follow. Then the fight must be carried into the rural districts.

All honor to our present State Board of Health—they have done faithful work for the public good. Dr. Richard H. Lewis, the secretary, has been a hero, standing as a giant in defense of the medical profession for the public's general welfare. On the basis he has been placed no one could have surpassed his work and results. But the time has come when the State of North

Carolina should have a Secretary who should receive sufficient salary to justify him in devoting his entire time to that office, looking after the public health at large, and especially at this time to instruct the public against tuberculosis. It should be his duty to visit every County Medical Society in the State, organizing in each county Anti-Tuberculosis Leagues composed of all classes, give public lectures with lantern illustrations in larger towns. Visit all the schools in the State giving public lectures along hygiene and enlightening the youth of our colleges who will be the leading spirits in the fight in the future.

Much could be said along this line but in short suffice it to say I believe the right man in this place will make his name immortal in North Carolina for ages to come. He will not be second to our greatest warriors or statesmen of the past.

In conclusion I would like to suggest that the North Carolina Association for the Prevention of Tuberculosis here assembled take the necessary steps to bring this matter before the present legislature and insist that the office of Superintendent of Health for the State of North Carolina shall be a State officer who shall devote his entire time and attention to organizing and educating the people and the profession how to prevent sickness at large and especially to organize and educate how to prevent the dreaded enemy—Tuberculosis.

President: On account of the similarity of subjects of Dr. Highsmith's and Dr. Weaver's papers, and the shortness of time, and the fact that we want to hear from Dr. Gordon and Dr. Bolton, I would suggest postponing the discussion of Dr. Highsmith's paper and discuss it with Dr. Weaver's.

Dr. Gordon: The Board of Medical Examiners wish to confer with this committee a little while, and while I have been very much interested and have been very highly entertained by the able paper, I would ask to be excused for a little while, and we will come back later.

President: The next paper is, "Civic Aspect of Tuberculosis," by Dr. H. B. Weaver.

Civic Aspect of Tuberculosis.

By Dr. H. B. Weaver, Asheville, N. C.

Since the discovery of the cause of Tuberculosis in 1882, by Robert Koch, more has been said and written on this subject than all other diseases put together. There is no question of the day which is attracting more attention from the public from a social and economic standpoint, not a problem of more absorbing intent to the physician from a medical and humanitarian

aspect, than the scientific and economic consideration of the methods and means of prevention and cure of tuberculosis. Notwithstanding this plague—consumption—has hung like a pall upon the face of the earth for thousands of years, killing not only only millions but billions of men and women, more than all wars and pestilences the world over, yet the people of the world have never been fully aroused to a mighty sweeping action, until within the last two decades.

We read with horror the ravages made by epidemics of cholera and black death, which have swept over Europe and Asia, and quake and tremble in amazement at the devastation, sorrow and death caused by the earthquakes of California and Italy. There seems to be something appallingly impressive in a malady or catastrophe which is mysterious, spreads rapidly with great mortality, and quickly subsides, but to an epidemic which is always and everywhere with us, claiming its victims yearly by the millions, we present a stolidity as fatalistic as death itself. It is heartrending indeed to read of the 100,000 deaths caused by Sicily's earthquake, but that does not equal the frightful mortality from tuberculosis in the United States alone, in one year.

Twenty years ago we stood facing this problem without hope and helpless in staying the ravage of this dread scourge. This attitude was the natural result of an idea of an unknown cause, insidious process, and incurable nature of the disease, and the world contented itself with the philosophy of "what can't be cured must be endured." But to-day, thanks to medical science, new hope and life have come to us. We now know the cause, nature and origin of consumption. We know that two prime factors enter necessarily into the causation of every case of the disease, the seed and the soil; that the germ is a vegetable parasite or fungus, which originates, in the pulmonary variety, only from the sputum of a consumptive patient; that this germ does not multiply outside the body, and that the sunlight and air soon destroy it. That the disease is not and cannot be inherited, but may be acquired. That a predisposition may be inherited or acquired. It has been demonstrated over and over, that tuberculosis is an infectious, communicable disease; and if communicable, then preventable and curable. These questions are so trite that they are put entirely beyond the pale of controversy. The tuberculosis problem must be viewed therefore chiefly from the civic aspect.

It is needless for us to call attention to the appalling prevalence of tuberculosis

the world over. To-day we stand facing the vital statistics of the world, which tell us that two million die annually from the frightful scourge; that the migration into eternity from the United States alone, amounts to 200,000 yearly. Every day 3000, and each minute of the day two persons fall from this enemy. Eminent men who have been engaged in pathological work for the last twenty years, give it as a conclusion that 96 per cent of the population of the entire world, over the age of eighteen, is tainted with tuberculosis either in the latent or active form. That is the cause of one-third of all deaths between the age of fifteen and forty-five, the most useful and productive period of human life. It is estimated from late statistical experience that of the 90 millions of population of the United States that ten million of people are doomed to die of consumption who might be saved from an untimely grave. It is simply appalling when we behold the sacrifice of 200,000 victims as a tribute we pay to their arch enemy, not counting the untold treasure which amounts to billions of dollars.

But let us come nearer home, and view what havoc this disease is playing in our Southland—Tennessee, Kentucky and West Virginia lead the van with the frightful mortality of fifteen per cent, while North Carolina, with our sister States South Carolina and Virginia, comes next with twelve and one-half per cent. The most astonishing fact as brought out by statistics is that a group of 340 of the largest cities in the Union, with a population of 33,000,000 and with a yearly death rate of 60,000 from consumption, giving a mortality of ten and one-half per cent, rank second in comparison with North Carolina which is first, with less than two million souls, with a mortality of twelve and one-half per cent from consumption which send into eternity yearly over 2500 men and women. If we extend the comparison the figures show that the twelve largest cities with a population of ten million, representing nine different States, from Massachusetts to California, whose population represents forty-five per cent of the whole, have a less death rate than North Carolina, which has only five per cent urban population.

This high death rate in our State shows certainly that consumption is more prevalent in the rural districts than one would suppose from casual observation. In 1900, out of 2350 deaths from tuberculosis in country districts. And if, as has been shown, tuberculosis is the cause of twelve and one-half per cent of all deaths, 2500 dying yearly, in North Carolina, and there

is only five per cent of urban population, there is no question but there is fright-mortality in the rural districts with ninety-five per cent population. Therefore these facts and figures prove that tuberculosis is more of a social problem than a purely medical one; and this idea I wish to emphasize. As a social problem it makes it a matter of grave concern to all members of society; its prevalence depends largely on social conditions; in turn it aggregates social evils, and the practice eradication depends upon *social activity*. What then shall we do? This combat must be waged on two lines of action; sanitary prevention and cure. The keynote to the whole situation then is prevention, which includes a crusade of education. The people must be instructed in a few simple facts, in regard to the origin, nature and treatment of tuberculosis. That the germ does not multiply outside the body; that it may be killed by exposure to sunlight and air in a few hours; otherwise it may retain its virulence for years in a dark, damp apartment; that the pulmonary form, or consumption of the lungs is by far the most frequent, causing eleven-twelfths of all the deaths from tuberculosis; that the germ must find lodgment and growth in the tissues of the lungs; must be expectorated or coughed up, dried and pulverized with the dust, before it becomes dangerous to others. It would seem therefore, that the weapons are indeed simple. In the language of the great sanitarian. Kropf, we would suggest: "The control of the habit of indiscriminate expectoration or spitting; the disinfection of apartments where consumptives have lived; the education of all members of society in a few simple facts about the cause and prevention of consumption and the isolation of all tuberculosis patients in hospitals and sanitariums where they can be properly cared for under medical guidance in all stages of the disease." I know this to many sounds utopian but until the municipal and State authorities take this matter in hand and handle it in a practical, common sense manner, tuberculosis will continue to decimate our beloved State. And now the social aspect affect arises. The ignorance and indifference of the common people must be *controlled*. They must be taught that the strength and resistance of the defenses of the body are as important as the strategic attacks of the enemy. They must be taught that everything that makes men and women healthier and happier are germane to the prevention of tuberculosis. This should be mainly the work of the school teacher and lecturer. The better housing of the working classes; the improvement of the sanitary conditions of

churches, theatres and all public places; the enforcement of standard healthful conditions in all occupations, especially in cotton and other factories; the reduction of working hours; the raising of wages; the abolishment of child labor; the regulation of food and drug laws, especially those that pertain to diseased milk and meat, and those that relate to narcotic drugs, alcohol, cocaine, and opium. That the excessive use of alcohol triples, the predisposition to tuberculosis there is no doubt. Knopf says: "There is another point in regard to alcohol I wish to emphasize, and that is the idea that alcohol is a remedy for consumption. There never has been a greater mistake. Alcohol has never cured, nor never will cure tuberculosis. It will either prevent or retard recovery." What words of wisdom.

This then is the function of the State. And I am glad to see that our legislators have already gone far into the work of reformation and upbuilding of our commonwealth in the form of sanitary laws which will tend to the eradication of tuberculosis from our State. But they can, and should do more.

Some of us as far back as 1900 began the agitation of the subject of public hospitals and sanitoriums for the indigent poor, who were suffering from tuberculosis. (And your humble speaker in 1904 in closing his presidential address on the subject, worded the following language: "In considering this question from a viewpoint of economy our legislature should be induced to consider the advisability and necessity of establishing and maintaining hospitals and camps for the treatment of the consumptives of the State. The State is spending many thousand dollars for the care of the insane, which is commendable from humanitarian reasons, but I have no hesitation in saying that greater returns would be attained in the expenditure of one quarter of the amount in the prevention and cure of tubercular diseases among the helpless; poor.

From the latest data at my command, I estimate there were in 1903 about 10,000 tuberculosis people in North Carolina. According to mortality rates it would give 3000 annual deaths from tuberculosis. Are not these figures alone sufficient to convince us of the necessity of the mobilization of all our social and political forces in the education of public opinion up to the point of demanding legislation on the subject? And when we have done this the ways and means will be forthcoming for the establishment and maintenance of hospitals and camps in suitable portions of

the State for the care of the indigent sick consumptive.

I therefore present this side for the consideration of the Committee on Public Policy and Legislation and ask them to discuss the proposition of praying the legislature for the enactment of laws for the purpose in view." From then until now we know the history and results of legislation on the subject. By influence and presence of the medical profession in 1906 we got an appropriation of \$15,000, \$5,000 additional yearly for the erection and maintenance of a sanatorium for tuberculous people of the State. While this is not half sufficient for the crying needs of suffering humanity, let us be thankful and take courage, and ask our present legislature to duplicate this munificent gift.

A most significant and encouraging fact to-day is the remarkable decline in mortality from tuberculosis in the United States as well as other countries, which amounts to forty per cent in the last ten years. This goes to prove the value of hygienic measures, for this is more conspicuous in those large cities where the sanitary laws are enforced. To all those who were fortunate enough to attend the late Tuberculosis Congress, one fact was significant: that the death rate has been decreased from one-seventh to one-tenth (according to mortality reports up to 1906). *Only* in those places where special control given for the enforcement of hygienic and sanitary measures, and in those special sections of the country, the development of sanitation has been the most rapid and lasting, and far-reaching in its consequences.

Now to sum up up this whole question, what are the practical deductions? We must educate, we must educate, or perish by our own indifference and negligence. First, let the 2,000 physicians of this State, one of whom is in every community, take it upon himself and inform himself if he does not know, in the whole subject of tuberculosis, and then let him teach the people the simple rules of prevention, by teaching the cause, the origin, and nature of tuberculosis, telling them how the germ gets into the body, how to destroy it when it is coughed up by a consumptive patient, instruct them how to build up and maintain, under dietetic and hygienic rules, the body tissues so they will successfully resist the infectious germs. There should be appointed in every county possibly, by the axillary county medical society, a secretary or lecturer, whose duty should be to go over the whole county or city distributing leaflets and tracts and giving lectures on the subject of tuberculosis. The Superintendent of Education of the State should

have power to publish and furnish to the common schools of the State a suitable and efficient text book on the subject of tuberculosis and the manner of its prevention.

In addition to that there should be established by law free dispensaries in every considerable town and city in the State for the free treatment of the tuberculous poor. There should be compulsory laws of notification by superintendents of health in every county for tuberculous or other infectious diseases.

Dr. Faison: I simply want to say something about Dr. Highsmith's paper. I expected a good paper from Dr. Highsmith, —I know him,—and he gave us a good paper. I appreciate his paper, and want to thank him. He said one or two things on which I want to take issue with him a little. As to the inherited side of the question, I want to take issue with Dr. Highsmith there. I admit that he has some authority for taking the position that it is inherited. At the same time, I believe that the latest opinion on that question and the most scientific side of the question is that it is non-inheritable. I hold in my hand now a book written by a learned man in the city of Boston, Mass., Dr. Badger, who has gone over the ground and who has every opportunity to keep up with the times and ought to stand in the forefront, and he puts this down in his book: "Tuberculosis is preventable, is curable, and it is not hereditary." I believe that children inherit an intrinsic immunity against it and not a tendency to it. I believe that children who come out of tuberculous parents inherit an immunity and are less likely to take tuberculosis than a child who comes out of parents that have never in their history had tuberculosis. Now, that is far advanced for a good many, but a great many are taking the same position and they agree with that side. As to mothers with tuberculosis, the doctor says that they should not nurse their children. I agree that a mother with tuberculosis should not nurse a child who has gone through the state of gestation and parturition with infection and not inherited that; if a child comes up after he is born, if he has it in the blood with the placenta and has this infection, and has communicated infection, and not as a previous condition, but a pure infection, and that mother,—while I admit and while I take the position and while I teach in diseases of children that they should not allow mothers who have tuberculosis to nurse their children, at the same time if that child is to be bottle fed and that mother is to have the care of that child and prepare that milk, she is more dangerous as a nurse for the purpose of preparing and feeding that child than

she would be if they let the child take its nourishment out of her breast. (Applause.) That is the position I want to take. In this protection that you speak about, there are certain grounds that you should consider. The bacilli, after the ground is prepared and the patient goes down with tuberculosis, and as time goes on and this tuberculosis is in that patient, after a while other dangers step in, other cocci and bacilli enter, and they sweep down on these tubercles wherever they are, set up an inflammatory and an infectious condition, producing what I believe to be the stage of consumption.

Dr. Minor: Mr. Chairman, I am so sorry not to have anything to disagree with my good friend, Dr. Faison, on, but I am so glad that Dr. Highsmith in his excellent paper laid weight upon the importance of waking up public opinion rather than enforcing laws which have no public opinion behind them.

Dr. Faison: Both, Doctor. I am just one step ahead of him.

Dr. Minor: One other point is Dr. Highsmith's admirable suggestion that we hope some day to have a State official of Health of the efficiency of which he spoke. The American Medical Association is trying to have one for the Government of the United States, but with the organization of this Society it seems to me that the possibility of that is bright. We have a steering committee, or ways and means committee, to consider these things, and I hope Dr. Highsmith's suggestion will be earnestly considered and pushed. We all realize that if Dr. Lewis and the Board had a man with undivided time at his disposal, that the legislature could easily give him, how rapidly he would push this work. He would be the strongest sort of help and I can imagine nothing that would be more useful than the suggestion of Dr. Highsmith. As you know, I am deeply interested in the question of fighting tuberculosis in the stores and workshops, but in pushing our work there can be nothing more important than this suggestion of Dr. Highsmith's, and we must push this thing until such an officer is appointed to represent us and push this work in this State.

Dr. Sam Crowell: I am glad that subject was brought out. I think it is more important than treatment. In reference to the hereditary treatment, I will be very brief and say that I do not believe that it is so. I do not believe that any one inherits a tendency to have tuberculosis from either one of its parents, and I do not believe that we are doing our generation and future generations justice in teaching them this. Why so? Because a child who has a tuberculous father or mother is taught that it has

a hereditary tendency to have tuberculosis. It goes to its grave, perhaps after living many years, with that dread on its mind that it is bound to have it. Gentlemen, it is not reasonable to say that it can have it. The cells are not transmitted from the father or from the mother. Neither one of those cells are transmitted, and how can that tendency, a tubercular tendency, be transmitted? There may be a hereditary or a weakened diathesis or something if the parent of the child is not strong and the part of the cells that come from that weakened parent may transmit something that is weak. It may not be strong, but to say that it has a predilection to have tuberculosis, I do not believe it, and I cannot see where it is possible, I cannot see where it is reasonable to say that it does. It may have a weakened diathesis or something and the first thing that comes along to attack it, it may yield more readily than one who has not had a tuberculous parent. It may be the tubercle germ or bacillus that attacks it, or it may be the germ of some other disease, but I do not believe there is a predilection for the tubercular germ.

Dr. Hunter: In regard to Dr. Highsmith's idea of a State Secretary, I think the time is now ripe, and if he will put that idea in the form of a motion and ask this delegation to ask this legislature to set aside a sufficient fund to employ a regular physician,—and there is no one better than Dr. Lewis,—and empower him with all the authority necessary, I believe that he can have more influence and more power toward stamping out tuberculosis and other diseases. At least eighty per cent. of our diseases are preventable.

Dr. Julian: I would like to call your attention to the fact that this committee is appointed for that purpose and this will be for discussion after the committee reports back to the general body. That is the province of the committee, though we are glad to hear from you.

President: I rule Dr. Hunter in order.

Dr. Hunter: I came over to the municipal convention that met here some time ago, and that thought was suggested there. In speaking of sanitation and hygiene, the assistant Secretary and one of the medical officers of the United States Navy or Marine Service, brought out a great many ideas in regard to sanitation, and this idea of a State Secretary was suggested the next day, but they didn't have time to elaborate upon it, but it sees the danger and the thought seems to be that the time is now ripe to have a State Secretary, and I believe if the present legislature will ask for it, I believe if Dr. Highsmith would put that in the form of a motion, he would get a second and we

would get the present legislature to create such an office and set aside money enough to pay the incumbent.

Dr. ———, of Winston-Salem: I enjoyed both of those papers very much, and it was a treat to listen to them, and I would like to emphasize just one or two points. One is in regard to the management of tuberculous patients, as it comes under the Health office. Being the Health officer of the city of Winston, I would like to call attention to a little trouble we have had along that line. We have a law in our town which compels every house where there is a tuberculous patient, upon the removal of that patient, the house is to be fumigated by the man who has charge of all fumigating of houses in Winston. Every house where there is a death from tuberculosis is fumigated very carefully, and, as the doctor from Asheville said, we use the formaldehyde with gas. We give them a very thorough fumigating, but the great trouble is that we have a law which is supposed to compel the physicians to report every case of all diseases of a contagious or infectious nature, barring small pox, diphtheria, and scarlet fever, and it is impossible for me to receive a report of all cases. Hence there are tuberculous patients moving from houses, and the houses are not fumigated simply because it is not called to the attention of the Board of Health. It is possible a law could be passed to compel the physicians to be more careful and to report these cases of tuberculosis, which are very dangerous where they live in a house some months or even years, go out, and another family comes in. This is one trouble we have to contend with, and I believe one way to get at it is to have the town or city pass laws, and not only pass laws but penalize, so you can compel reports whereby these houses can be properly fumigated upon removing patient.

Dr. Minor: This is the very problem that I was going to speak of, and it is of exceeding importance, on the one hand, if you have a medical profession so enlightened and so conscientious, with such a public opinion back of that medical profession, as to force the doctors to do that, you will get such notice as we need. I am perfectly willing to admit that unfortunately our profession counts but a few members who are so independent or so unafraid of their patient's disapprobation that they do this. I am willing to admit that we will never get any statistics or disinfecting of sick people until we do this, and I think we should do this from a sense of duty. They have tried two ways in New York,—one, the strong arm of the law, failure to comply with the law is punished, and of course you realize

the enforcement of law in a big town like New York is much easier than it is here. Here everybody knows everybody else in the community, and it is harder to enforce those things. The second is rewards. Each one is paid so much for each patient he reports. They have succeeded in this after threshing it out for the last ten years in New York, but they have won, and while our fight will be more difficult, this is one time that I do not believe it is a case for legislative laws but for city laws, properly enforced, to help us out. At the same time, Dr. Faison, you will also remember that we have got to cultivate feeling about it.

President: If there is no further discussion, I will ask the gentlemen to close the discussion, but before that I want to say that our time is short, and I am going to make you stick to the subject of the papers hereafter. I am not going to let you discuss discussions. A man can talk one five minutes and he has got to say it all in that five minutes, and quit then. We have got to get through. Other people want to be heard. There are other papers, and we must get through. The discussions are interesting and good, but we must get through. I will ask the gentlemen in closing to ignore the discussion of the discussions and only discuss that part of the paper that they have discussed.

Dr. Highsmith: I thank the members for the discussions they have kindly made on my paper. I don't think it is necessary for me to try to enlarge on the question of heredity, and therefore I will have nothing whatever to say along that line. I thank you again. With reference to bringing this matter before this present body in the form of a motion relative to the election of the Superintendent of Health, who would give his entire time to it, I think would be better to come from the committee, and that will be heard from later.

President: We will next have a paper on "Tuberculosis from a Surgical Standpoint," by Dr. Winslow, of Baltimore.

Tuberculosis from a Surgical Standpoint, with Especial Reference to the Diagnosis and Treatment of Tuberculosis Peritonitis.

By Dr. Randolph Winslow, Baltimore, Md.

Some diseases are distinctly medical in character, some are distinctly surgical, and some are on the border line between the two, and may pass from the domain of one to the other very readily. As an example, typhoid fever was until recently considered to belong entirely to the realm of internal medicine, and in the vast majority of cases its allegiance to general medicine remains

undisputed, but when intestinal perforation occurs it becomes a surgical disease, and a recourse must be had to surgical therapeutics or the sufferer is doomed to speedy death. Various other incidental conditions may also arise in the course of, and subsequent to, an attack of typhoid fever which demand surgical rather than medical measures for their relief.

Almost all other so-called medical affections may at some time become transformed into surgical maladies, and thus it becomes important that the internist should be well grounded in surgical diagnosis, and that the surgeon should have a good working knowledge of internal medicine. To no class of cases is this statement more applicable than to those multitudinous affections due to the invasion of the bacillus tuberculosis. Tuberculosis is protean in its manifestations, and may attack any organ or tissue of the body. Some of these manifestations are best treated by medical and hygienic methods, some by surgical operations, and many by a combination of these very diverse measures.

Tuberculosis of the tegumentary, and of the mucous surfaces where accessible to sight and touch, are amenable to surgical treatment, such as curetting and cauterizing the ulcers and sinuses, or excising the diseased tissue. In the case of lupus, the inflamed area may be scraped and burnt out and treated with the x-rays. In tuberculosis of the internal organs, surgery offers the chief hope of relief or cure in many instances, whilst in others, as in disease of the lungs, reliance must be placed in medical and hygienic treatment. Tuberculosis of the brain and its membranes is practically a fatal disease, and as yet surgery has not been extended to this class of ailments, but who can tell when these may not also become amenable to direct treatment by trephining with incision, excision or drainage.

Tuberculosis pleuritis is frequently cured by aspiration or drainage, and in a few instances vomica of the lungs have been incised and drained, but without much success. Passing below the diaphragm, we find tuberculous lesions of some organ, and structures by no means uncommon, and to a large extent susceptible to surgical procedures for their relief. I will only mention here tuberculosis of the intestines, especially the caecum, appendix, the kidneys, ureters and bladder, the prostate gland, seminal vesicles, and testicles in the male, and of the tubes and ovaries and uterus in women. Practically any and all of the organs may be the seat of tuberculosis, and those that are not essential to life, and even

portions of those that are, may be subjected to surgical operations with large expectations of success, in suitable cases.

The lymphatic glandular system is a very frequent location for tuberculous lesions, and the chronic enlargement of the cervical and other lymph nodes, forming a complexus of symptoms and conditions formerly known as scrofula, but now recognized as due to the invasion of the tubercle bacillus, is well known to all of us. Whilst these conditions may be markedly benefited by medical, hygienic and climatic treatment, it is to surgery that we look both for the purpose of removing the offending masses and for the equally or more important purpose of preventing the still further invasion of the body by these pesant organisms. Tuberculous lymph adeomata should be regarded very much in the same light as we regard malignant tumors, and in most cases should be excised.

Chronic inflammatory lesions of the spongy bones, and of the epiphyses of the long bones are tuberculous in character and whilst benefitted enormously by medical, dietetic and climatic treatment, require also surgical aid, such as immobilization of joints, injections of iodoform emulsion into joint cavities, and the erosion or curetting of tuberculous foci, and in bad cases with extensive destruction of the bones, the excision of the diseased parts. Sinuses that have been discharging for months or years may be made to heal by the forced injection of subnitrate of bismuth and paraffin as recently announced by Carl Beck, of Chicago. This is a very substantial advance in therapeutics, and one that enables us to deal safely and effectively with a class of cases that have been indeed surgical opprobria.

I have in the foregoing remarks cursorily and briefly endeavored to show that tuberculosis is a border line disease that in some cases is best combatted by medical means alone, in others by a resort to surgical methods, and in many by a combination of both. In other words a very large proportion of the lesions of tuberculosis are surgical in character, and should be treated upon this assumption. In the remaining time at my disposal I desire to direct your attention to the consideration of one manifestation of tuberculosis, that of tubercular peritonitis, its diagnosis and treatment.

Tubercular peritonitis may in isolated instances occur as a primary lesion, but in practically almost all cases it is secondary to tuberculous disease elsewhere, and most frequently the primary focus is situated within the abdominal or pelvic cavities or in close relation to them, though this is not always true, as metastases may occur from the lungs, bones, lymph glands and other

more or less remote structures. In young children the infection often proceeds from the intestines and mesenteric glands, in women from the uterus and fallopian tubes, whilst in both sexes it may result from tuberculosis of the appendix, caecum intestines and urinary organs.

The disease may occur as an acute military tuberculosis, which is not amenable to surgical treatment, and but seldom comes under the surgeon's care; or as a subacute or chronic process, which is frequently greatly benefitted and often cured by surgical means and clinically for practical purposes, tubercular peritonitis may be divided into the ascitic form, where there is more or less free fluid in the peritoneal cavity; 2nd, the plastic or adhesive form, where there is but little fluid and marked adhesion of the intestines and other abdominal viscera, and 3rd, ulceration and suppurative form. No age is exempt from this disease, and it occurs at both extremes of life, though the largest number of cases are found between 20 and 40 years of age. I have records of more than 30 cases occurring at the University Hospital, a number of them under my own care, from which I learn that the youngest patient was 3 years of age, and the oldest 55. In many cases the proportion of white to colored is about equal, but it is said to be more common in America in the negro race. It occurs more frequently in females than in males, in my series 20 were females and 13 males. It usually occurs as a diffuse process, but in some cases a circumscribed collection of fluid occurs which has been frequently mistaken for ovarian cystoma. Such a case came under my own observation where a large cystic swelling was found in the middle line of the abdomen, simulating an ovarian tumor, but when incised was found to be an encapsulated collection of fluid due to tuberculous peritonitis. Spencer Wells observed this condition in 1862, operated on the patient by laparotomy and the woman was alive and well twenty-two years subsequently. Cirrhosis of the liver is often associated with tubercular peritonitis. In a case of cirrhosis of the liver with enormous dropsy in a man of 35, I performed laparotomy and found the omentum thickened and rolled up, and it was thought by an associate, expert in clinical medicine, to be a case of tubercular peritonitis with cirrhosis of the liver. I evacuated the fluid, rubbed the convex surface of the liver with gauze, and stitched the omentum into the abdominal wound. He had been tapped several times at short intervals previous to this operation, was tapped again 40 days after the operation and has never been tapped since. I saw him recently on the street,

a year after the laparotomy, and he had been able to work and follow the avocation of a painter, and was in a very good condition. I do not claim positively that this was a tubercular peritonitis, but it looked like one.

Symptoms and Diagnosis.—Tuberculous peritonitis may present many diverse symptoms, or in some cases there may be no symptoms sufficient to arouse suspicion, and the affection is discovered accidentally during operations for ovarian, tubal or other abdominal lesions. An example of this character came under my personal observation some 20 years ago, in the case of a lady about 40 years of age who was operated on for ovarian cyst by my colleague, Dr. John G. Jay, at the Hospital of the Good Samaritan. When the abdomen was opened the peritoneum was found to be inflamed and covered with a huge crop of military tubercles. She made an uneventful recovery, but contracted gripe a year later, followed by pneumonia, terminating in phthisis, from which she died.

Sometimes this condition is first learned during an operation for hernia, as in a case occurring at the University Hospital, in the service of Dr. Frank Martin.

Generally, however, the symptoms are fairly characteristic, and in some cases the onset is so violent as to suggest appendicitis, strangulated hernia or other abdominal crises. There is usually malaria, often pain or distress in the abdomen, tenderness or pressure, digestive disturbance, nausea and vomiting, some elevation of temperature or irregular or subnormal temperature, sometimes chills and night sweats, weakness and emaciation. The bowels may or may not be affected. In most cases free ascitic fluid will be detected at a comparatively early period, which may be in considerable amount, whilst in a small number of cases the fluid may be encapsulated and simulate cystic tumor of the ovary or uterus. The abdominal walls are usually more or less rigid. Often there will be found evidence of lung involvement or of pleural effusion, or glandular or bone disease. Sometimes a tumor mass or lump may be felt, which may be rolled up omentum, or mesenteric glands, or agglutinated coils of intestines, or encapsulated collections of ascitic fluid. The urine is frequently of high specific gravity, and scanty; it may or may not contain albumen and casts. The leucocyte count is variable, from 7000 per cubic millenat to 20,000; haemoglobin is usually lowered. Sometimes there is pigmentation of the skin. Where the disease begins insidiously and there is a low, continuous fever, with some tympanites and tenderness, typhoid fever may be suspected. In

a case of this character, with a positive Widal reaction, typhoid was thought to be certain, and an operation was done for supposed perforation. The condition was then found to be one of extensive tubercular peritonitis, with milary tubercles scattered thickly over the intestines and peritoneum. He made a good recovery and was well when I last saw him 7 years after the operation. In this case it was subsequently learned that he had had typhoid fever 3 years previously, which caused the Widal reaction. In cases of doubt tuberculin should be injected to obtain its reaction, or the acitic fluid may be injected into guinea pigs, though this method is too slow when the case is demanding prompt operation.

In fact with the symptoms just mentioned the diagnosis is usually easy, but as has been said it may sometimes simulate typhoid fever, but the temperature chart will usually differ materially from that of typhoid, and the Widal reaction is usually negative in the tuberculous process, and always so if the patient has not had a previous attack of typhoid fever. The acute infections of the gall bladder, appendix, kidneys, pelvic organs of the female, and the ordinary pyogenic forms of peritonitis must all come in for consideration in making a diagnosis of tuberculous peritonitis. Diffuse intra-abdominal carcinoma may also cause symptoms simulating those of tubercular peritonitis, but usually occurs at a later period in life.

Of 500 cases of tuberculous peritonitis collected by Mendelich 68 per cent. were of the acitic form, 29 per cent were of the adhesive, 4 per cent of the suppurative form. Now, as these forms vary in frequency, so also they vary in gravity and in amenability to treatment.

Prognosis.—The prognosis of tubercular peritonitis whilst grave, is by no means hopeless in a large number of cases, even without surgical treatment. The exudative form presents the most favorable prognosis; the adhesive form a less favorable one and the suppurative form is usually fatal. The encysted types also are favorable for recovery under surgical treatment.

Treatment.—The acute milary form which is a manifestation of a general systemic infection is not suitable for surgical treatment, and should receive medical and hygienic handling. The fibrinous or adhesive forms if treated surgically, also usually terminate fatally, and there is great danger that fecal fistulae may form and never heal, and the ulcerative suppurative form of the disease likewise is unfavorable for surgical treatment. But, as a matter of fact, the different forms are not sharply differentiated from each other, and very

frequently are associated with the ascitic variety of the disease. It is the exudative or acitic form of tubercular peritonitis that is especially amenable to cure by surgical operation. Laparotomy with the evacuation of the fluid, even when nothing more is done, and the incision closed is frequently followed by an arrest of the morbid process; no further accumulation of ascites taking place, and in a very large proportion of cases a permanent cure. This proportion of marked benefit, and permanent cure reaching from 50 to 75 per cent. Why opening the abdomen exerts such a beneficial influence on the tubercular lesions is not understood. Whether it is the effect of light and air, and if so, how it exerts this beneficent action is not known. Certain is it, that in a large proportion of cases, great benefit follows operative methods, which should however be combined with such general and hygienic treatment as is found efficacious in other forms of tuberculosis. In most cases it is not wise to drain the peritoneal cavity, as there is not only increased danger of pyogenic infection, but the track of the drainage tube is liable to become tuberculous and to form an incurable fistula. In suppurative forms, indicating a mixed infection, drainage must be employed, in connection with the postural method. Whilst simple incision with evacuation of the fluid is often followed by good results, we must remember that very frequently the peritoneal invasion is dependent upon a strictly local primary focus, which is usually the fallopian tubes in women and the appendix and caecum in both sexes, and we should so plan our incisions that we can explore these regions and if the structures mentioned are involved they ought in most instances to be removed. Dr. Wm. J. Mayo first called attention to the fact that benefit frequently follows operations, only to be followed by a relapse, and this due to a re-infection of the peritoneum from tuberculous adnexae or other foci. When the primary foci were removed and the constant re-infection stopped, permanent cure resulted in his hands in 25 out of 26 cases. The best incision therefore in females is the median line, as it enables us to reach the pelvic organs for exploration, and if necessary, for removal, whilst the right lateral incision offers the best opportunity for exploring and removing the infections emanating from the appendix, and caecum in males. Attention has already been called to the fibrino-plastic or adhesive forms of tubercular peritonitis, which are not so susceptible to benefit from surgical measures as the acitic form, but are also sometimes benefitted by laparotomy. Whether associated with ascites or not, if the intestines

are matted together it is not safe to attempt to unravel them, as the bowel is liable to be torn, or fistulae of a persistent character may form. It is in this form of the disease that intestinal obstructions sometimes occur, which may in some instances be overcome by an enteroanastomosis, though they usually terminate fatally. Local encysted collections of fluid ought to be incised and evacuated.

I have the records of 33 cases diagnosed as tubercular peritonitis, but in most instances the histories cease with the discharge of the patient from the hospital, and nothing further is known of them. Of the 33 cases seven were not operated on, and 3 of these died in the hospital and the others left the hospital unimproved.

Twenty-six cases were treated by laparotomy; of these 20 recovered from the operation, 6 died, 5 of the 20 are regarded as cured, 13 as improved, 2 were discharged unimproved. It is probable that a number of those who were discharged improved and subsequently recovered.

My personal experience of indubitable cases consist of 5 treated by laparotomy, of these 3 recovered and are well, in one case 7 years after the operation, 2 left the hospital improved and are well; one and a half years after the operation 1 left the hospital improved, but died subsequently at her home, and 1 died of intestinal obstruction at his home a month or more after he left the hospital.

A case operated on by Dr. J. Mason Hundley in 1899 remains well ten years subsequently, and a young lady, aged 19, operated on by Dr. St. Clair Spruill, in 1906 remains well, has since married and given birth to a child.

The number of cases here recorded is too small from which to generalize, but when we consider that it is usually the serious cases that are submitted to laparotomy, we must be convinced that the opening of the abdominal cavity and the removal of the primary focus of infection when possible, is followed by very beneficial results.

Conclusions.

1. Some cases of tubercular peritonitis undoubtedly recover without surgical intervention, but there is always the doubt as to the correctness of the diagnosis.

2. Not all cases are appropriate for surgical operation, but great benefit and permanent cure follows laparotomy in almost 50 per cent of suitable cases.

3. The cases in which there is free fluid in the peritoneal sac, with little or no evidence of disease elsewhere, are best treated by surgical methods.

4. The adhesive forms sometimes are

cured by laparotomy, but in a much smaller proportion of cases.

5. After the patient has been subjected to surgical treatment, all other measures of a hygienic, climatic and medicinal character that have been found useful in pulmonary tuberculosis should be employed.

Dr. Strong: I don't want to discuss any paper. I was a pupil of Dr. Winslow's. He was Demonstrator of Anatomy when I was at the University, and I was afraid of him then, and am yet a little afraid of him, but I want to say that we are so glad to have him here, and thank him for his excellent paper. I have had some surgical experience in tubercular peritonitis, and I wish to say a few things along this line. I want to agree with the Doctor as to the uncertainty of the diagnosis. I don't believe you can make a positive diagnosis in tubercular peritonitis. Every surgeon must have a working basis, or excuse for operating, and I have made this rule: Where I have ascites and have no cirrhosis of the liver, and have no heart disease, or pronounced kidney disease, it can be but two other things, and that is tubercular peritonitis or a malignant disease of the intestines. That has been my experience. Now, if I can eliminate all those other things, which any man can do, then it becomes a surgical disease, and I usually make my diagnosis by operating, for ascites, or a case of malignant disease, is a surgical disease, and as the Doctor said, the ascitic form is an operative form, for you eliminate the constitutional treatment, and that is the way I have made most of the diagnoses. I want to emphasize this fact, too, that it is always well to look for the focus of the infection. I believe, like he says, rarely is it a general infection. I believe it is an extension, and if you just open up the abdomen, I don't believe a surgeon has done his duty. I think he ought to go and hunt the appendix, then he ought to go to the tubes in the female and the ovaries, and then he ought to hunt for those little mesenteric glands, and usually you will find a little connection of the focus right there; don't hunt over the abdomen in these cases. I agree also that you should not drain those cases except in suppurative form. It is a simple infection, as I understand it, tubercular infection, but if you open it up and drain it, you add to the danger. The percentage of cures which I have had has been followed up, and while not so many as the Doctor has had, still about fifty per cent. of the cases have been practically cured. And another thing,—it pays to operate two or three times in those cases. I enjoyed Dr. Winslow's paper, and I am sure we are glad to have him in our midst.

Dr. Highsmith: I enjoyed the paper by Dr. Winslow, and it opens a great field for discussion. One point I would like to emphasize is the possibility of many times overlooking tubercular joint diseases in children. If these cases are diagnosed early and put at rest with proper constitutional treatment, we would have many a grown man to-day with a good limb on him that hasn't got one. I have had several cases recently of that kind that I diagnosed as tubercular synovitis, and by placing the joints at rest with the proper environment, hygiene and good feeding, the patients have come out all right and made us feel good that we were in time. About tubercular peritonitis, I have had some little experience along that line. I can recollect in my first experience I had two cases that came right along together. One of those cases was a young girl about twelve years old that was tremendously distended. I made immediate incision, and I never saw anything to equal the amount of tubercle nodules that were all over her bowels and all over the peritoneal wall. I couldn't describe it better than to tell you that it looked like one of these fly papers, that you use to catch flies on, and you had taken a hand full of rice and thrown against it. There was so much of that tubercle that it looked like to close it, even after I had wiped it out with the gauze as closely as I could, to close it and not drain it, would be a very serious thing, so I left it open and drained it. That patient got well. Another case that I had the same day of a lady thirty some odd years old, who showed not so much advanced condition of tubercle, I closed, and she didn't live more than a month. This first case lived for a year, and went back to a factory village, and later developed la grippe and colds, and went from bad to worse until the tubercular condition developed in her lungs, but never returned any more in the peritoneal cavity. The diagnoses of these cases, as Dr. Strong says, we can diagnose by exclusion. If you exclude a bad liver, bad heart, the kidneys, then you have this distension and enlarged mesenteric gland, with swelling of the feet, and a drawn, pinched expression about the face, and possibly with fever or maybe without fever, nine times out of ten it is peritoneal tuberculosis, and I believe in these cases, too, they generally start from a local focus, and if you operate on these cases and the local focus is confined to the ovary or tubes or appendix, and you can remove completely that local focus and leave a clean field behind you, with the proper care of those patients, they will get well. But with those cases, like all others, we come in too late so many times, and usu-

ally have charged to us what ought not to be, doing the best we can in the situation. One case I would like to report is that of a colored man who came to me some time ago, more than three years ago. This fellow had the worst kind of a case of peritoneal tuberculosis, and had been drained, closed, and got well, to all appearances, went to work, hunting, etc., and returned to me with the worst case of tubercular orchitis. I did a complete castration. He recovered. There was no sign of any tubercle elsewhere, and two years after that, one day I met a great strong giant of a negro man, and he said, „You don't know me, do you. Doctor?" I said "No." He said, "This is Fayette Robinson of Sampson county, that you operated on." I never saw a more perfect specimen of a man. He said he attended to a large farm, and felt good.

Dr. Kirk: I enjoyed the papers, and think we ought to have more papers of this type. While the educational side and the civic and economic side have been taken up well here at this session, we haven't had very many papers that you speak of strictly as technical, and I think this idea ought to be kept up, because you have to keep up the interest of the doctors, as they will be the leaders, of course, in this medical thought. The doctor speaks there of the question of temperature in his tubercular peritonitis cases.

The observation I have had with most patients where the bowels are involved in tubercular processes, they nearly always have sub-normal type, more often than a higher temperature, unless it is acute peritonitis. I think the appendix is very often the site of the tubercular process, more often than we think for, and of course no operation for tubercular peritonitis is complete without finding the focus, wherever it is. The point taken as to drainage, I think, is very fine, indeed, and an operation for fistula is always much more successful where the entire fistulous tract is excised, and the wound closed up, instead of trying to curette it and treat it by drainage. I would like to ask the doctor for his formula for his bismuth emulsion, how often to use it, and how in the treatment of tuberculosis.

Dr. Minor: I wish to ask Dr. Winslow in closing to kindly tell us if he has followed his cases to see how many have developed tuberculosis of the lungs or of other portions of the body. My own experience has been that it has occurred very seldom.

Dr. Faison: I want to speak of three cases that have come under my observation. I thank Dr. Winslow very much for his paper, and it is a splendid paper. Three cases have come under my care. I am not a surgeon, and don't claim to be. I have

nothing to do with it except make a diagnosis. Over twelve years ago a married woman with two children came under my care. The diagnosis I made was a tuberculous condition. She was put in the hands of the surgeon. The diagnosis was not made for a tubercular condition but just a tubercular disease, but when the surgeon opened the abdomen we found the condition that Dr. Highsmith speaks of, a tubercular condition over the entire peritoneum, with a small amount of ascites in the abdominal cavity. The local focus was removed completely. The surgeon then rubbed and scrubbed the peritoneum with a normal salt solution, and after that filled the abdomen with normal salt solution, came out, sewed up, complete. That good woman made a rapid recovery without a rising temperature, and she is on the streets every day, and as good looking a woman as there is in Charlotte, and that has been over twelve years ago. Another woman was older than the Doctor speaks of in his peritoneal cases. She was seventy-four years of age. She had so much ascites that I decided to tap her, and I tapped her in the usual position and drew away what fluid was there that would come away through the canula and when the fluid ceased to flow, to my utter astonishment she was almost as large as she was before, so in calculating I found there was plenty of liquid somewhere else, so I slashed the instrument in another part of the abdomen and drew out the liquid. I had there a woman with two cysts which proved upon the autopsy afterwards that this woman had acquired agglutination of her intestines along the middle peritoneal cavity, making two peritoneal cavities, and she had ascites in one and tubercle and ascites in another chamber. She was seventy-four years old. I called for a surgeon, and he thought it was too late to operate, and I dragged along after him. We waited, and the undertaker took her. The third case was a young man about eighteen years of age, who went down,—and this is a different case to the others, but a tubercular case in the peritoneal cavity. A young man eighteen years of age, at school, went down with appendicitis. He was carried to a sanatorium and operated on by a surgeon, found with appendicitis and tubercular appendicitis. The question was with us, and we looked it up to the best of our information, that here was a case of appendicitis due to bacilli that went down that young man's throat in the milk that he drank.

Dr. Winslow: First of all, Mr. President, I thank Dr. Strong for making himself known to me, and the other gentlemen for their favorable comment. In regard to the

formula for the injection, I am sorry that I can not give that to you right off hand. If you will give me your name and address, I will send it to you. We keep them on hand at the Hospital, and I am not bothered about preparing them, so I have not taxed my brain to remember the formulae, but will be glad to send it to you. We have two formula, one to be used where there is suppuration, which consist simply of bismuth and vaseline, and the other to be used where there is little or no suppuration has a certain proportion of paraffine added to it, so that it will harden the tissues, or at least will have consistency. Dr. Minor, the large proportion of cases that I have mentioned just incidentally were not under my own care. They have gone from the hospital, and I don't know what has become of them. I mentioned specifically five cases that I know were tubercular peritonitis,—that is, five in my own hands that there was no peradventure about. Other people make reports, and a report to be of any value must be accurate, and a great many reports that come are not accurate. I am speaking of things that I happen to know about, where one may make a report and he don't know what he is talking about. He don't know about the after history of the cases, and so I doubt if they were cases of a certain kind or not. I had five cases that I know were tubercular appendicitis. Of those five, three are well. One young man, operated on eight or nine years ago, is now a great big, fat, healthy fellow. Two of the women operated on the same day, both of whom I heard from yesterday were well, and two others who left the hospital improved, but subsequently died.

Dr. Minor: Died of what?

Dr. Winslow: One was a gentleman who, although he had ascitic tubercular peritonitis, had also obstruction. His intestines were agglutinated together, and he had an obstruction and died from the obstruction, and I didn't think it was wise to do anything further for him. The other was a young girl, and I presume she died of general tuberculosis.

President: Dr. Winslow's paper is open for discussion.

Dr. Faison: I would just like to ask you one question, if you give tuberculin and how you give it and what you think of it.

Dr. Kirk: The Doctor has asked the question if give I tuberculin, and if I do, what I think of it and how I give it. Yes, I give tuberculin and give it in suitable cases. Not every case, of course, requires it. When a case is suitable, I give it in small doses.

Dr. Faison: What do you call small doses?

Dr. Kirk: (On account of impossibility of hearing what was said, this is not very complete.) Well, a case that has no high temperatures, cases that are not weakened down by other complications, and in incipient cases. You get better results, of course, in incipient cases than in advanced cases. In far advanced cases, I don't think it does much good. I have gotten very good results, I think. I am not prepared to give statistics upon it just now, but I should say that my results have been sufficiently gratifying to continue the use of the tuberculin.

I start with No. 1, and then work up as far as the patient can go, usually carrying them through the fifth solution.

President: The next number on the program is by Mr. Kesler, and I sincerely trust that those who are here will wait until we have heard Mr. Kesler in his paper, and we have just a word from Dr. Gordon, of the Legislative Committee. Dr. Gordon wants to say only a few words and then we will hear from Mr. Kesler.

Dr. Gordon: Mr. President, I don't understand that it is the object of the General Assembly in appointing a committee to visit the Association of Physicians for the Prevention of Tuberculosis, to come here and speak. I rather think that we were sent here to listen and get the information that this very learned body will be able to give to us, and I want to say to you that Dr. Bolton and myself will take a great deal of pleasure in taking back to the General Assembly all the information and all the wants that you may give us, and do the best we can to bring it before the General Assembly for any good that may result along this line. I want to thank the Association on the part of the State for your kindness in extending to us the courtesies of the floor, and perhaps Dr. Bolton, my colleague, would be glad to enter into the discussion of some of the papers. I feel that North Carolina is making a very long stride in the right direction in holding these conventions, and in bringing before the General Assembly of North Carolina the needs along these lines. I thank you, gentlemen, for your kindness and your courtesy. (Applause).

Dr. Bolton: Gentlemen, like Dr. Gordon, I want to thank you for the courtesy that has been extended us as representatives of our legislative body. We are very highly gratified that Governor Kitchin, in his inaugural address, called attention to the fact of the work of this Association, and the prevention of typhoid fever, and things of that kind, and I believe our legislature stands ready to co operate with this association or any other organization that stands for the betterment of the citizenship of our

State. (Applause). As I understand it, we came here with no intention of speaking, but only to find out if this organization wants any legislation, and if they want legislation that carries an appropriation, and if so, how much. We have no assurance that it is going to be given, but I believe that the legislature will give us an allowance if we ask for a reasonable contribution for the furtherance of the work of this association. We came here, not to talk, as I tell you, but for the honor and pleasure of being with you and to take back any message that you may want to send to our legislature through us. We thank you again for the courtesies extended us and for the hearty welcome we have received.

Dr. Minor: May I suggest this,—we all understand, of course, I suppose, that our committee will meet with this committee from the legislature this afternoon, and I think it is desirable that this should go in now. Dr. Lewis made the suggestion that the State Sanatorium should be called the State Training School for Tuberculosis, and I should like to offer this resolution.

Be it resolved, That it is the sense of this Association that it is desirable that the State Sanatorium be called the State Training School and Sanatorium for Tuberculosis, and that its teaching function be regarded as its chief function, and that the legislature be requested to so change its name.

President: We will have a committee on resolutions and business, and I will ask them to make a report this afternoon and we will act upon their report. This, I take it, will come in with that as well as a number of other resolutions. I will say to the gentlemen of the Legislative Committee that it is needless for me to say that we feel highly honored to have you here, and we are especially gratified to have you here, and that the North Carolina Society for the Prevention of Tuberculosis should have attracted your attention, but we are more pleased that the work we are undertaking meets with your sympathy and that we have your assurances of co-operation. The committee will meet with you this afternoon, and will try to tell you what we want, and I trust that we will want what we can get.

I take pleasure in introducing Rev. Dr. Kesler, of Thomasville, who will speak upon the subject of "The Minister's Opportunity in the Warfare against Tuberculosis." (Applause).

The Minister's Opportunity in the Warfare against Tuberculosis.

By Rev. M. L. Kesler, Supt. Thomasville Baptist Orphanage, Thomasville, N. C.

This warfare is within the range of the minister's proper work. He preaches against

the sins of the soul and the doctor against the sins of the body. Hermeneutics and therapeutics can reasonably be brought together so that the doctor and preacher, by a combined effort, may more easily produce the proverbial sound mind in a sound body, with both of these overruled by a great soul. This is a whole man in triumphant health. The preacher needs to have more regard for the physiological basis of morals, and the doctor to recognize more keenly, that while he is dealing with a body, there is something there besides.

The wise pastor can be a great help to the doctor, sometimes by going into the sick room, and many times by remaining out. Wise or unwise, he must, from the nature of the case, come in touch with all forms of disease and suffering along with the doctor. This is ancient doctrine. In the Old Testament Scriptures we learn that the requirements in the Mosaic economy, and later in the more perfectly organized temple service, were not arbitrary but in addition to their ceremonial significance had behind them deeply sanitary reasons. We, of an advanced scientific time, who prate in learned terms, have scarcely come up to the ancient Jewish doctrine of keeping clean. In plain English, "Cleanliness is next to Godliness." This is not a quotation from the Bible, but it has a mighty scriptural sound and is a summing up of scriptural common sense.

The preacher ought to attach himself to every force in the community which encourages better sanitation of every kind; that makes much of God's out-of-doors, and pleads for cleaner air and more of it. He should be a mighty force in all such movements. But perhaps his most effective work can be done incidentally. He can be a great builder of public sentiment. While visiting his people he can disseminate much sanitary knowledge by pleasant and suggestive conversation. The health of the family and of the community is an inevitable topic. He can talk intelligently and encouragingly of the most improved methods of prevention and cure of this awful disease. He can cite instances within the range of his own knowledge, cases that have been helped or cured. He can make suggestions to many who had never thought of it, of how the germ is in the sputum, of the value of ventilation, and also suggest ways and means of bringing it about; that pure air along with the gospel is free and should be used undiluted. And if he can adroitly arouse a popular prejudice against the sheet iron wood heater in favor of the old open fire place and open grate, he may count himself a missionary from heaven in the interest of stronger lungs and richer blood.

This same old heater is the meanest form of heating ever devised for destroying oxygen and polluting the only breathing air in thousands of living rooms. This doctrine is not in the interest of the hardware business, to be sure, and unless you are prepared to lose much of your pneumonia practice, I advise you doctors to say very little against this old beauty which adorns so many living rooms.

A great opportunity is afforded the preacher in his own church building for the suppression of dust, the carrier of the disease, and in giving pure air, as well as a pure gospel, to his drowsy listeners. If, after the Sunday night service, the house is closed like a box and kept so until the next, the people should be excused from attendance on the ground that the preacher is working a plan for sending them to heaven just a little ahead of time. When a large congregation is assembled, and it is discovered that the church is too warm, and also lacks ventilation, let him call on the ushers to throw wide every window while the congregation stands and sings a verse or two. This does not cause a draft, but constitutes an open air condition, while the window, slightly raised, sends a draft with unerring precision upon the delicate lady who is always in range, and at the same time does not help the stifling center. If the preacher is too much absorbed in the heavenly to appreciate the earthly conditions, I would advise that he has selected the wrong planet on which to do his preaching.

Again, happy is the preacher who can inculcate ideas, and make them popular incidentally, by the skillful use of comparisons and illustrations that throw light two ways. By making a strong illustration from an old back yard in which the old tin can, unemptied garbage pail, and other things, run riot, he can clean up half the back yards in the neighborhood, and no explanation would be necessary. He can preach a sermon on "Ye are the light of the world" and by the happy use of pertinent household illustrations, may turn the light into the parlor in which darkness has had full sway since it received the new piano and many colored art square. He ought to be able to give such an illuminating view of the mission of light, all light, that the sun might be induced to look into many a sleeping room with his healing face.

I would also suggest that pastors in their organized capacity, especially in cities, could by agreement, preach sermons occasionally in support of anti-tuberculosis leagues, and for the encouragement of conventions like this. In some of the large cities where similar conventions have been held the pastors of the cities have made this

a part of their theme on the Sabbath preceding the conventions, thereby arousing popular interest in the meetings. The deep human interest that gathers about the suppression of this dread disease is surely not foreign to the work to which the minister is called, and he should now and then call the eleven o'clock hour into this service.

The point at which this warfare is most likely to fail is pointed out by Ray Stannard Baker in the January number of the *American Magazine*. It seems that we have about acquired the knowledge of the best methods of prevention and cure, but to apply it where it is most sorely needed, that's the question.

The poor mechanic bending over his iron lathe ten hours a day, who has a wife and an interesting family of small children at home, wholly dependent on him, goes to the physician for advice. He is in the first stage. The doctor tells him he must get out into the open air. In most cases he could as well have told him to buy a three thousand dollar automobile and spend half his time on the Mecklenburg good roads. A poor widow with five children clinging to her skirts looks pleadingly into the doctor's face with that hectic spot on her cheek and that unnatural gleam in her eye. He replies, you must have more nourishing food, more out-door recreation, free from care. He might as well have prescribed the Selwyn hotel as a boarding place and a cruise on the Southern seas as out-door recreation. She can do neither without help other than the doctor's knowledge. Other human hands must reach to her help or the only thing left for her is to go away, lie down and die, and leave the multiplied seeds of the disease to go on to other generations. This deadly bacilli in its attacks loves to smite the poor and the weak, and in its destruction there is more needed than the direct rays of the natural sun; there is needed the warmth of a heavenly human love to apply the knowledge where humanity suffers most. The disease of poverty is also to be reckoned with. So you will please add to the service of the doctor and the hospital, the service of the philanthropist and the loving helper of humanity where it is most in need! Before this war is carried into Africa the preachers and churches must catch a vision. A careful perusal of an old book which some of you have read, there are carefully accounts of One who, while on the most heavenly mission, came so nearly spending all his time healing the bodies of men, that a thoughtless critic might charge that he had missed his way. It is too late in the day for these words to have any semblance to originality, but a widespread application of the teaching and

practice of the Great Healer would stir the world as another advent.

We only have to look to behold the opportunity for the minister and his organized Christian forces in this warfare which you are waging with such unselfish enthusiasm.

Dr. Julian: I especially want to thank Mr. Kesler for his paper, and I also move that we give this to the press at once, as there is a representative in the Association, and ask that it will come out in this afternoon's paper.

Dr. Minor: I will amend that and move that Dr. Kesler be requested to see that his paper is published in the religious papers of the State, and that he read it before some religious organization as well.

Dr. Julian: I furthermore move that this be made one of the leaflets of the Society for the Prevention of Tuberculosis. It will do more good than any other paper read.

President: You have heard the resolution of Dr. Julian, as amended by Dr. Minor. I will put the question. All in favor, will signify it by saying "Aye."

Voted.

Dr. Lewis: I would like to say that when the State Board of Health distributed these pamphlets on the Prevention of Tuberculosis, the plan was to send them to the different classes of the population, with a personal letter to each, pleading for their assistance. First, to the physicians, and then to the teachers of the State, ministers, and lawyers, and I am glad to say,—I am not proud to say, because my own profession did not respond anything like they should, the ministry responded more thoroughly than any other class of our people (Applause), and I got more letters from the ministers saying they would distribute the pamphlets if I would send them, than from any other class, and please to send them so many copies. (Applause.)

Rev. Mr. Patterson: As a minister, I would like to express my appreciation of the splendid paper which Dr. Kesler has read. We will stick to each other, but I feel myself a very deep interest in the work of this Association. Next to a meeting of ministers for the discussion of ways and means for curing of souls and destruction of sin, I have never attended a convention in which I was more interested than in this convention for the discussion of ways of preventing and curing the bodies of men of the sickness of the body. As a minister I think that I ought to be interested in this work, because of the example of my Lord and Savior. He cured the diseases of the body. He cured them in order to convince men that he was able and willing to heal their souls, and ever since the day of our

Lord, the work of the physician and the work of the minister have been very intimately associated. During my fourteen years in the ministry, I have always made it a point to maintain the closest relation possible with the physicians in my parishes. In the three parishes which I have served in that time,—I thought of it just this morning and spoke of it to my wife,—my most intimate companions were always the physicians. If I had a physician in my congregation, I cultivated his acquaintance and spent a great deal of my loafing time in his office, talking with him about his work, and there is no subject that interests me more than the study of medicine, the study of disease, etc., and its treatment, except the study of theology and the word of God. I agree with Dr. Kesler as to the place which the minister can occupy in carrying on this warfare. A good part of his work, of course, must be in the line of encouragement and suggestion. I do not believe in the ministers interfering with the physician in his work in treating cases or preventing them, but I do believe in his cooperating with the physician. I believe that the minister and the physician should be on friendly terms. They ought to understand each other. I never had a quarrel with a physician about a case of sickness which he was treating, going in and out, sometimes with the physician and sometimes when he was not there. I have sometimes ridden with the physician to visit a case, and I have sometimes sat by and held the patient's hand while the physician performed an operation or dealt with the patient. I remember just a few months ago, back in Pennsylvania, going with a physician in my church to see an old gentleman, where an operation was to be performed, and he asked me to come in and be present. I sat by the bed and held the old gentleman's hand, and after the operation was over and I came to visit him afterwards, he thanked me for being present and said that holding his hand did him a great deal of good. I held his hand while the physician was performing the operation, and it seemed to add some comfort to him. That is a figurative illustration of what the minister may do in this war against tuberculosis. Suggest and help and encourage. Now, the minister must have the cooperation of the physician, too. The physician must be willing to have the minister's help. I don't think he ought to cast him out. The minister ought to be sensible and reasonable. He oughtn't to spoil anything for the physician. He oughtn't to talk anything that would hinder the physician or do anything that would hinder him, but the physician oughtn't to do anything or say

anything that would hinder the minister in helping him. Now, I was calling on a family some time ago where they had had a death from tuberculosis, and another member of the family was very anxious lest she should contract this disease, or had contracted it, and I felt it was my duty to speak a little word of encouragement and suggest that she should not be frightened, that she should take all necessary precautions, etc., but she said, "The doctor says I am a nervous wreck." The doctor should not have told her that. The minister and the doctor, it seems to me, ought to make more use of suggestion. The mind does have a great deal of influence over the body, and the minister's work, I think, should be along the line of encouragement, by suggesting to the mind health, and the doctor should not be against the minister when he is trying to do that. The doctor should not be suggesting trouble, he should not be telling the patient that such and such a thing is going to happen tomorrow or the next day or a month ahead. In another family not long ago, a woman told me that she felt pretty good today, but she just knew she was going to feel bad tomorrow. I don't know who told her to think that way. The minister should not tell her to think that way and the doctor should not tell her to think that way. I think the minister and the doctor should agree in preaching health in the sick room, and they should help each other to bring about the recovery of all who are sick, and help each other in the prevention of the spread of disease. I am glad to have a part in this convention, and shall be glad to do anything in the way of helping forward this movement. (Applause.)

President: The next paper on the program is, "Some Duties and Public Duties Regarding Consumption." by Dr. Eugene M. Street.

Dr. Street: There are ministers and ministers as well as doctors and doctors, and if there are allusions to them in my paper, you will understand that they are not meant for those who have come and helped us in this work that we are trying to do here today.

Some Duties and Public Duties Regarding Consumption.

By M. Eugene Street, M. D., Glendon, N. C.

It is so self-evident that the medical profession single-handed cannot, successfully control consumption, that all thinking men must see the necessity of enlisting the general public into warfare against this disease which causes the most deaths and the greatest economic waste.

Success, as in all great undertakings, de-

pend upon thorough organization. Let those who are competent be our generals, colonels and captains, the rest the rank and file, and carry out the instructions of the superior officers and victory will surely be won.

The great interest awakened regarding consumption within the past few years is simply marvelous; and if this can be continued with properly directed effort, will accomplish results still more so.

One most important thing is to diagnose consumption while it is curable. About ten per cent. of the physicians, taking the country over, will make the necessary early diagnosis, and advise the patient accordingly. What shall be said of the other ninety per cent? How can success against this scourge be hoped for, so long as such a state of affairs exists? A few years ago the writer, in a paper before the State Medical Society, suggested the advisability of requiring every candidate for license to practice medicine in this State to demonstrate ability to diagnose consumption while curable. This would save many lives annually.

The public must learn to apply for treatment before the line has been crossed beyond which there is no returning to health and length of days.

It is an experience so frequent to the doctor as to be heart sickening to have a young man or woman, very often a young husband or wife, come with a statement something like this: "Doctor, I have been under the weather for some months; my stomach has been out of order, and I have been troubled with dyspepsia; I have fallen off a whole lot, and now I am losing strength and get tired out easily, and lately I have been bothered some with a cough. I have tried so and so, at first I thought it helped me. Then Rev. Mr. Blank told me if I would take such and such a remedy it would cure me, for he had known it to cure so many *just like I was*. Not getting any benefit from this, Miss so and so told me of a certain remedy that would surely cure me—I tried it awhile. Then I read in an almanac or newspaper, or my church paper, of cases that exactly fitted my own and I sent and got several bottles of that. But I am no better yet, and I have about lost faith in everything, and sometimes I am afraid I will never be much better—in fact I am afraid it is going to run into consumption." On examination of the patient reveal greater or less areas of consolidated lung tissue, and very often cavities and infiltrations that show the dead line has already been crossed. It is not a great while before more infections have occurred, and a few more orphans have been added to the thousands upon thousands caused every year by

consumption and promiscuous prescribing by clergy and laity and advertisements in religious and lay papers.

Another illustration, not too infrequent, is to be consulted by a patient who wants to be cured of malaria. Has been treated by Dr. Blank. The fever and chills would stop for awhile only to return, and there has been progressive loss of weight and vigor, now has night sweats, and is hardly able to work. Some doctor has failed to examine the patient, a diagnosis was made from symptoms. Now, in the majority of such cases, recovery is out of the question. Shortly, the patient is only a memory. Others have been infected. How long, oh, how long! obtuse and longsuffering public, before a physician, who fails to diagnose consumption while it is curable, will be disgraced? It is a public duty?

There is a man who has overdone himself and has never gotten over it; another who broke himself down nursing a sick relative or neighbor that died of consumption, and of late has been on the down grade; another who has been too closely confined in office, store, shop or mill, and "it is beginning to tell on him." Many other illustrations might be added. These men are not sick, only "a little off," but—they keep getting a little further and further off. A few months later many such patients have a case of consumption that can be diagnosed by any layman of ordinary intelligence.

Now what happens? Too many times after it is everlastingly too late something like this: The patient is told that his lungs are affected and he is sent off to some distant State. Instead of getting well he dies of homesickness and consumption among unsympathetic strangers; he is sent to some sanitarium, sometimes to one where any patient is received if he has the price per week, and doesn't appear likely to die before he can be kept a few weeks, and sent home in time to die. Who is it that has not known of instances where consumptives in the last stages have been kept in some of these institutions for the treatment of tuberculosis until the family had spent all their living, and then sent the patient home just in time to die? If this was a precautionary measure against infection, adopted by family and patient, it was their business. But if, many now recall, the doctor in charge or the institution wilfully and knowingly mislead the family with false statements for the sake of getting business it is a form of fraud and robbery equaled only by the glowing claims put forth by patent medicine manufacturers, and by the religious and lay papers that enter into partnership with them

by advertising their impossible claims,

It is your duty to write your church organs that they must stop this partnership with fraud. When enough subscribers protest against such a thing the editor stops it. I had to stop taking a church organ for this cause. It not only advertised sure cures for consumption and cancer, but carried an advertisement of a remedy which is generally understood as enabling a girl to step aside from the path of virtue with impunity, as this was a sure remedy in *all* cases—*never* failed. It is only a question of time when the American people will deny the use of the mails to periodicals that advertise such frauds.

Oliver Wendall Holmes called consumption, "The Great White Plague." From some phases an apt designation, but that of the Psalmist is more so. It is surely "a pestilence that walketh in darkness"—mental, moral, physical and financial darkness all provide the condition of choice—the condition of natural selection of this greatest destroyer of human life. Enlighten the mind, live the beauty of holiness, light well every room of the house and be thrifty, and this noisome pestilence will avoid you. Quit storing wash clothes in dark closets, Put them where a window admits the full sunlight and admit volumes of fresh air.

Keep flies out of your house. It is ignorance, laziness and loathing filthiness to allow flies free access to your kitchen and dining room. Don't patronize a butcher, baker or grocer who allows flies free access to his wares. Besides buying tuberculosis you may be buying a fatal case of typhoid fever or some other fly-borne disease.

It is a duty every one owes the public to avoid contracting tuberculosis. You are almost sure to transmit it to some one else. Every case has come from another case. If you have it you are an object of sympathy, but that doesn't give you a right to infect others. Stop kissing other people and defenseless babies, and stop using dip-pers and drinking cups used by others.

There are many sanitariums for the treatment of tuberculosis. Like everything else of the kind there are good, bad and indifferent. There are many you can go to with the happiest results if you go in time. There are some that take everything that comes along, no matter how far advanced and hopeless the case if the management thinks there is no immediate danger of their dying on their hands. The greatest care is to ship the patients off just before they die—just as some doctors send a patient away to such institutions to get rid of them just before death. In such institutions those patients who are in the earliest stages of the disease and have the best of chance for re-

covery are daily exposed to advanced cases that are nothing less than a walking pestilence, and reinfections until the vitality of many of the patients who might otherwise get well are sure to follow in many instances.

There is another evil too prevalent to which I would like to pay some respect. It is the air of mystery and elaborateness of detail with which treatment is surrounded by some institutions. They exercise care in the selection of their patients, and send many back home cured and happy. But they have the idea thoroughly instilled into them that the treatment of consumption is the most mystic, elaborate, difficult, and necessarily most expensive duty a physician has to perform. The truth is that the best—the very best treatment is simplicity itself. The benefit came from proper food and exercise—physiological living—under favorable climatic conditions. But commercialism has hidden the truth behind much ado.

This is not the way to control the death rate from consumption among the masses.

If the State Sanatorium at Montrose should prove of no other value it would be worth many, many times its cost to the State in the single item of the exposure of this humbuggery in the treatment of tuberculosis as carried on by some physicians at some institutions. But it will do more than this. A very large percent of the patients who go there will return cured, and carry and disseminate a knowledge of how to live to escape from consumption's ravages, and how to prevent its spread. A large percent. of the patients who go will not be admitted; for it was not established as a hospital for incurables. This is the saddest feature of the institution, but it will not be without its important lesson to the public. It will teach the necessity of requiring an early diagnosis from their physician. And when the public awakes to this necessity, the rank and file of the medical profession would as well be prepared to give it; it must come.

The State of New York established a Sanatorium for the treatment of incipient tuberculosis. The first year only ten per cent. of the patients sent there by the physicians from all over the State could be admitted under the law. The other ninety per cent. were too far advanced and had to be sent back home. Would it be reasonable to expect the doctors of North Carolina to make a better showing than the doctors of New York?

Let every physician, every preacher and every newspaper tell the people, white and black, that they must admit abundant light into every room of the house, or, they

are running a great risk of sacrificing one or more members of their family to tuberculosis. Every house in the State that has not glass windows should have them before the end of the year. And too many houses amply supplied with windows are so thickly curtained that the rooms are too dark to admit sufficient light to quickly destroy the vitality of the tubercle bacillus. Men spend money to make windows to let in light and then women spend money to shut it out; then, if the man is not the victim, he has to spend money to bury a member of the family dead from consumption. This is not a joke. A well known railroad president, Henry Page, says doctors are not producers—merely live off the rest of us like merchants, musicians and spring poets. But if we teach the people how to prevent the enormous waste incident to tuberculosis I think his opinion of our economic value may undergo a check.

Dr. Williams: If I am not out of order, I would like to make a motion that it be set as a special order at the close of the discussion of Dr. Stanton's paper, that the Association receive a report from the Legislative Committee.

President: Unless I hear some objection, I will declare it to be so.

The following resolutions, adopted at a joint meeting of the committee sent by the legislature, Drs. Gordon and Bolton, and the legislative committee of the association, Drs. Dunn, Julian, Faison, Highsmith, Hays, Minor and Lewis, were presented to the association:

Resolved, That this committee request our representatives to bring before the legislature the desirability of appointing a special Secretary for the State Board of Health, with sufficient salary to devote his whole time to the hygienic and sanitary interests of the State, and that the appropriation to the State Board of Health be increased sufficiently to meet the necessary requirements of the case.

Resolved, That it is the sense of the committee that the Secretary of the State Association for the Prevention of Tuberculosis shall be an assistant Secretary of the State Board of Health, in charge of the tuberculosis crusade, and that he shall have a salary of not less than six hundred dollars (\$600.00) a year.

Resolved, That it is the sense of this association that it is desirable that the State Sanatorium be called the State Training School and Sanatorium for Tuberculosis, and that its teaching function be regarded as its chief function, and that the legislature be requested to so change its name.

Resolved, That we do not offer any further resolutions to the legislature at the pres-

ent time, but confine our requests to the three purposes above stated.

Resolved, That a committee of three be appointed who shall, with the advice of Dr. Gordon and Dr. Bolton, appear before the legislature at such time as is wisest to advocate the cause of tuberculosis suppression in this State, and that the Secretary of the Board of Health be requested to arrange at the same time for interesting lectures before a joint session of the legislature, and that such members of this committee as feel it in their power to go, will do so.

Resolved, That Dr. Dunn be requested to write to the legislature on the economic value to the State of the tuberculosis campaign, bringing into this report such things as have been brought out in these general meetings as seem valuable to him, he to make that report and the other members of the committee to make additional remarks thereto.

This committee was also requested to act as a Committee on Resolutions, to be presented at the same time, and offered the following:

Be it Resolved, That the following be added to the Constitution:

There shall annually be appointed by the President a County Secretary in each county of the State, who may be either a physician or a layman, and whose duty it shall be to enlarge the local membership of this Society and to advance the Society's interests in said county.

Be it Resolved, That there be added to the Constitution the following:

There shall be a Committee on Publicity and Publication, to consist of five members and also the President and the Secretary *ex-officio*. It shall be the duty of this committee to keep before the public through the lay and medical press, leaflets and lectures, the aims and purposes of this Society.

Be it Resolved, That the clause of the Constitution be so amended as to read:

There shall be appointed by the President, by and with the consent and approval of the Board of Directors (steering committee?) honorary members who shall be laymen citizens of North Carolina, in such numbers as may be wise. Such members shall be chosen from those who in financial or other ways can assist the crusade of this Society against tuberculosis.

Resolved, That there be appointed a committee of three, and the President and the Secretary *ex-officio*, as a Committee of Ways and Means and Steering, to devise ways and means for the Association, and to look after the new resolutions and policies of the Association.

Resolved, That the President be requested

to appoint these committees any time within the next two weeks.

President: I will entertain a motion that these resolutions be adopted and incorporated in the Proceedings of this Association as a part of them.

Dr. Kirk: I move that the resolutions of the Legislative Committee be adopted and incorporated in the Proceedings of this meeting.

Motion received a second.

Dr. Faison: Let me say this. In that committee meeting, what they ask for here, I assented to and was willing for everything they asked for, but I am one of the dissenters in it, that they have not gone far enough, that they didn't ask for what I thought they ought to ask for, and I want you to understand it didn't go quite as far as I wanted it to go.

Dr. Minor: Might I say that it was not my idea but it was Dr. Highsmith's excellent idea. He brought to our attention the fact that if we come along with too many requests, the legislature would probably pay no attention to it at all, and we thought it wisest to concentrate our attention on a few requests without demanding a large appropriation. While Dr. Faison is in hearty accord with all the things we are requesting, he thought we should ask for more in the way of laws, etc. That we think will finally come, but we did feel that if we went to that legislature with too many things we probably would get nothing at all, but if we went with not too many we would get them.

President: Those in favor of the adoption of these resolutions as part of the regular proceedings of this Association and their incorporation in the minutes as a part of the proceedings, will signify it by saying "Aye."

Voted.

Dr. Williams took the chair.

President: At this point,—I think probably it is a good one, to do it,—I presume many of you realize to a certain extent the important factor in the success of this meeting that our Secretary has been. (Applause). I don't know that anybody appreciates it quite so much as possibly the Vice-President and myself. What of success has been in this meeting, so far as the officers of this Association are concerned, belongs almost wholly, and certainly very largely,—I will say wholly,—I will not put any reservation in it at all,—to the hearty and strenuous efforts and enthusiasm and personal sacrifice of our Secretary. (Applause). I want to pay tribute to his hustling. I want to say he struck me at first as being too much of a hustler, wanting to work in single harness too bad. I thought he was going to

work too hard in single harness, but I saw he was going to do more when he had his own way than any other way, and it was an easy way, and I want to say that the success of this meeting belongs, so far as the officers are concerned, entirely to Dr. Julian, and I therefore want to make a motion that this Society extend a special vote of thanks and appreciation to Dr. Julian for his excellent work.

A unanimous rising vote, amid applause.

Dr. Minor: May I say one thing? Certain of your members are going before the legislature to make plain to them the importance to the State of this movement, but I know our men have not got one-tenth the influence you men have got, and it seems to me you will be derelict in your duty to the Association if you do not write a personal letter to your representative, telling of the importance of this movement, and urging him to push it forward when it is brought up. I am sure Dr. Lewis will attend to that. I think if we North Carolinians will set to work and write our legislators and see our representatives, we can do a great deal.

Dr. Lewis: I want to say that it is very important in securing legislation to have the constituents of the representatives express their wishes and desires in regard to a particular bill. I have frequently gone to members and asked them about a certain bill, and they would say, "I have gotten several letters about that thing from my constituents." I hope you will bear in mind the words of Dr. Minor, and that all of you will make it a point to see and talk with and write to your representatives and ask them to support the proposed measures in the legislature.

President: Before announcing the next subject, I will say that I am going to stick to fifteen minutes on the papers, and we have agreed to cut down the discussions to three minutes each, because it is going to be absolutely necessary in order that we get through with a quorum when we get to adjournment. We will welcome any interruptions if anyone wants to pay dues. There is nothing to sign,—you just pay a dollar.

The next paper is by Dr. L. W. Hunter, of this city. The title is, "Is Tuberculosis Contagious?"

"Is Tuberculosis Contagious?"

By Dr. L. W. Hunter, Charlotte, N. C.

Is a question so frequently asked the physician and the answers to this question are so contradictory and indefinite that we deem it worthy of consideration at this time.

The information desired is, whether those in attendance upon or exposed to the exhalations or expectorations of the patient

are liable to contract the disease. We know that tuberculosis is not contagious in the ordinary acceptation of the term, as measles, scarlet fever, pertussis, &c. We have known persons to live in daily contact with the disease, nurse the patients under very unsanitary surroundings and with an utter disregard of hygienic laws and regulations and never contract the disease. While in other instances we have known families who observed all the laws of sanitation and hygiene, carefully guarded in their diet and every effort made to keep them in good health; yet when they reach a certain age or stage in life, the symptoms of this dread malady develop. We often see those who have inherited a predisposition or a tendency to tuberculosis sent to higher altitudes or distant places where ozone most abounds, and where out-door life and hygienic laws are strictly carried out, but we find the mark of Cain upon them, and they either come home to die or are brought back a corpse.

From observation and experience with the disease we are led to the conclusion that certain persons inherit a peculiar or pathognomonic form of glandular structures, or perhaps a pathological condition of the organs of secretion and excretion, so that there is within them a pabulum or food for the tubercular germ and in which or upon which this fatal germ alone can subsist and find a safe nidus or abiding place. Those who do not inherit this peculiar pabulum for the disease are immune and the tubercular germ cannot find a lodgement in their system. They may be exposed to the germs of tuberculosis at all times and in all stages of the disease with impunity, and if the germs were injected into their circulation they would not be propagated but would be thrown off as effete matter. We must conclude, therefore, that the fatal germ of tuberculosis must come in contact with a receptive prototype before it generates or propagates in the human tissue.

Dr. Minor: Mr. Chairman, I wish very much that I could believe with Dr. Hunter and had the diagnostic acumen to believe that there are those who had fortunately inherited this insusceptibility to this disease. We know, or we suspect that a certain degree of acquired immunity can exist in this disease, but that a real insusceptibility, such as Dr. Hunter said exists, I believe has never been proven, and I believe the effect of the propagation of such a doctrine upon the public will be harmful. I will not discuss the question I am sure Dr. Faison wishes to discuss as to whether certain people are especially susceptible or not. We know even in smallpox, although

it has been thought by some, and I have seen some cases that seemed to bear it out, that the best authorities doubt if anybody is absolutely immune. The question of immunity is only a relative one in any case, and the question is only one of degree, and it is a question of increasing the effective means of preventing or decreasing factors which can produce an infection, and I regret, if I understood the doctor correctly, I can not believe the doctrine he teaches, that certain people are entirely immune. In fact, it seems to be absolutely against the experimental proofs which are brought about by investigators. We know very well that Dr. Nagle (?) after autopsies of the most careful kind, that went to the microscopic care in their drawings, has proven that practically one hundred per cent of all persons over thirty years of age have tuberculosis in their system. If Dr. Nagle (?) is right in his assumption, and if my interpretation of the Doctor's remarks is correct, then the Doctor is wrong, because everybody over thirty was infected. We know perfectly well that some people carry tuberculous infection in their systems, some have it occasionally wake up to activity and go to sleep again, people who give an absolutely clear history of having tuberculosis at intervals of few or many years, and some in absolutely good health the rest of their lives will break out later in acute tuberculosis. We carry it in our systems, and by proper diet, or alcohol in some cases, or by all these things, we set to work to resist it. If, on the contrary, we eschew alcohol, or if we eat proper food, and other things, we can keep our resistance high, but that in my mind can not be classed as a natural resistance, that would make a person absolutely refractory to it. If you hold their vitality high, avoid excesses, with proper food, proper ventilation, all these things tend to disinfection of the infected, and vice versa, and I trust, I must confess, that I misinterpreted the Doctor's remarks.

Dr. Street: Immunity is something the workings of which we do not understand. Just what it is we don't know, but we have several beautiful working theories as to what it is; but like the clock or anything else that is running, at some time, it runs down now and then where there is a chance for infection. We have all seen that over and over, where families and individuals would think that they were immune to certain diseases, such as tuberculosis, and some member of that family would have tuberculosis when they couldn't get any history of tuberculosis in that family, and then may be one after another will go. It seems as if the immunity had run down.

Dr. Faison: I didn't want to say anything about this, but that idea of immunity in tuberculosis doesn't mean at any time, under any circumstances, a complete immunity. A man has the disease, and gets well of it in twenty years, is not like the immunity in measles and chicken pox and smallpox. It is not complete. But I do believe that a child who comes from parents who have tuberculosis have an immunity that a child does not have who does not not come that way. I don't believe in its contagiousness, in any sense of the word, you may use it as you please, either ignorantly or intelligently. That is my way of thinking. You can think like you please. But I believe in predisposition. The alcoholic idea won't cure people of a predisposition to have tuberculosis, because parents who are weakened by alcohol can not and will not beget children that are strong and healthy. Weak people don't get strong offspring, as strong people ought to. Now, that is what I mean by immunity and by the retractibility of tuberculosis, that it will not do, as Dr. Minor says, to put the idea out that that a man or a child is absolutely immune, because that isn't true. If you put that into his head, or into his parents' heads, they will foolishly and carelessly allow that child to be exposed to tuberculosis when he ought not. It is the environment that you must keep in mind. It is the environment that you must know about, and the environment that you shall always keep your hand and your eyes on, because this immunity, although it is worth something, that a man with this immunity would contract it as readily as a man that didn't have this immunity that has been handed down to him, that the Jewish race has this immunity and does not contract the disease as readily and does get well quicker than the negro race who hasn't that immunity and who contracts it and dies quicker.

President: I am sorry I made that three minutes rule, because I would like to discuss this paper.

Dr. Minor: I move that the Vice-President take the chair, and that the President discuss this question.

President: I can't entertain such a motion, because I wouldn't entertain it as far as anybody else is concerned and I am not going to entertain it for myself.

Dr. Minor: Then talk for three minutes.

President: I can't talk for three minutes on the subject of immunity, there is too much to it, and I don't know that this is quite the place to discuss the scientific side of immunity, because it is one of the most fascinatingly interesting subjects in the whole domain of medicine, and I ex-

pect it is one that we know as much about as any other. Dr. Hunter, will you close the discussion on your paper?

Dr. Hunter: Mr. President, I believe that there are immunes for tuberculosis. I believe so, because I have for years and years seen this disease under all conditions and all circumstances. I have seen, sir, a man with a history of a tuberculous family. His wife would have tuberculosis, his children would have tuberculosis, but he would live and die, of old age probably, and I have seen the man on his side of the house have tuberculosis, and the wife wouldn't take it. They would eat together, they would sleep together, they would live together all the days of their lives, and they would not contract the disease. This is especially observable in the negro race in the country. Some negroes will live with the disease under the most unsanitary conditions in the world, eat with it and sleep with it, and live with it all the time, and they haven't tuberculosis and you can not give it to them. That is why I say there are some immunes.

President: The next paper was to be presented by our Secretary, Dr. Julian, and in view of the enormous work that he has put into this, I am sorry to say that Dr. Julian, because of some changes in his paper, is not able to present his paper, because I think we needed just that much more out of Dr. Julian to make this meeting a success. I am sorry we must go over this now, Dr. Julian, and while you have contributed much more to this Association than any other one man, we would like to have had your paper.

Dr. Julian: We have an offer from the Charlotte Medical Journal to publish every paper with discussions, free of charge, and to send it out. We have no means on hand with which we can publish the transactions. I will have my paper published.

Dr. Minor: I think anybody will recognize that as an exceptional offer, that it offers us an exceptional opportunity to give us really a copy of the transactions which we could put away, without expense to ourselves, and it gives me a great deal of pleasure, therefore, to move that it be accepted. I think it is appropriate, entirely aside from its generosity. This is a North Carolina Society, its transactions are for the people of North Carolina, and the profession of North Carolina. Through the kindness of Dr. Register and the management of his paper, we get the opportunity to reach the doctors of North Carolina almost as a man, certainly a great number of them, and besides that, we can see later that the thing reaches the lay press and in that way reach

the whole State. I move, therefore, that the offer be accepted with thanks.

Motion received a second.

President: This is an exceedingly generous offer, I think, and as Dr. Minor said, it is going to make possible that which would otherwise have been impossible to us, and make one thing more for which this Association has to be grateful to Charlotte. If there is no discussion, I will ask all who are in favor to indicate it by saying "Aye."

Voted.

The Crusade Against Tuberculosis.

By Dr. C. A. Julian, Thomasville, N. C.

Only for a short while have we known the cause of tuberculosis, the disease that has swept thousands from the face of the earth, that has thrust its poisoned fangs into the human race in every country and every clime, that has shown no respect for age, sex, nor environment, that has caused such prolonged suffering and anguish, indifferent to treatment, performing its ravages unabated, spread broadcast by an unknown cause, disseminated by ignorance and carelessness, the ravager that has hovered over countless homes, breeding, inhabiting, and contaminating our helpless offspring, destroying peace, happiness and life, has, until a few years ago, been allowed to claim its victims and spread its infection without an effort to uproot the cause. Consumption! the word is awful, has forged the shackles for the most brilliant minds, it has blighted the lives of the most beautiful human flowers, sapped the strength from its petals, leaving them to wither and to die. We behold everywhere the aching brow, the pallid lip and the feeble form of the captive, hopeful crying aloud for succor. An awful condition faces all hands and all peoples in the prevalence of these diseases. In some form it affects at least one-half of the human race, it causes the death of one-seventh of all who die, and kills one-third of those who perish between the ages of fifteen and fifty-five. During every hour of the day and night fourteen persons die of consumption alone in the United States.

Up to this time ocular demonstration has failed to impress humanity, so common is its occurrence, so long does the disease allow the usual working power until like men who go forth to battle with fatalistic indifference, see their companions drop from their ranks and die unnoticed. The ravages of the disease have been viewed with comparative indifference, but now slowly the importance and significance of the discovery of the cause is attracting the whole medical profession and many of the intelligent laity. Mighty forces are in operation simultaneously with the increase of our

knowledge concerning the etiology of tuberculosis until there is a strong awakening to the importance of this crusade. I do feel it a great privilege to add my mite and be a member of an organization that is endeavoring to stop the infliction of "the great white plague," to wage active warfare against it, to aid the spread of the great truths of science, educate and demonstrate to all the fundamental facts that tuberculosis is a communicable disease and is preventable and curable. With these truths proven, with the implantation in the mind of man, of the pathogenicity of the bacillus tuberculosis the civilized world has determined to put forth every effort to stay the spread of this disease. There is something pathetic in the giving of health and life to man; there is something ennobling and inspiring in the prevention of a frightful plague.

Everywhere the fight against tuberculosis has commenced, societies are being formed in States and nations with the one purpose of finding out means of warding off infection and unneeded death. To combat this disease upon scientific lines requires a systematized effort, throwing away jealousies, fine-spin theories and personal aggrandizement, to arm sentinels to stand guard against this army of destroyers.

The slogan of the crusade against this disease is: "It is communicable, preventable and curable."

Not Hereditary.

The false idea that consumption is hereditary should be corrected, no fact known to science can be stated more emphatically than this. It is not impossible to acquire consumption by heredity; children of tubercular parents may have a predisposition to tuberculosis; they may be born having certain organs of less than the normal amount of resistance to the invasions of the tubercle bacilli. When children of tubercular parents are removed from an infected environment to a perfectly sanitary one they do not develop the disease.

I have noted carefully for the past 19 years in the Thomasville Orphanage, where I have charge of the medical department, that a very large per cent. of all the children admitted are the offspring of tubercular parents and that many of them are emaciated and pale and in many ways show a predisposition to tuberculosis when admitted, but after the necessary rules of their changed conditions have been observed, not a single death has been due to this disease.

Tuberculosis is now known, of course, to be caused by a specific bacillus. It may enter the body by inhalation, ingestion, or by inoculation. No organ of the human

economy is exempt from an attack of this germ. Wherever it secures lodgement local irritation begins, producing cavities, making inroads and onslaughts upon the vitality of the individual. The invasion of the bacilli is like seed sown on receptive and fertile soil, germinating, growing, and ripening as soil and seasons permit. There is one source only from which this germ gains its implantation and that is from the tubercular matter expelled from a tubercular body. And, practically, that one source of infection is the sputum. Science has singled out the micro-organism that has produced so much physical suffering and the destruction of these germs is the task that is now imposed upon us. Incipient tuberculosis is hard to detect, it creates very little disturbance and the person affected is seldom aware of it. It is usually brought to attention by an influenza, a pneumonia or a cold, and generally in the heated struggle of one of these attacks the tubercular bacillus joins hands with the streptococcus and staphylococcus in the tissues of the body of their host and they at once begin a work of destruction of the little tubercles or tumors, breaking down these tissues and scattering the seed with a larger implantation. The appearance of a cough, indisposition, loss of appetite, fever and night sweats indicate that a tubercle or tubercles have matured and that the imprisoned bacilli are being set free. Most patients do not recognize the nature of their trouble until these symptoms arise. The failure to diagnose the disease in the early stage, and sometimes, indeed, in a fairly advanced stage is unfortunate. I feel convinced that systematic physical examination and a properly interpreted history of cases who seem to be just run down and out of health, with no very obvious cause, would in many instances lead to an early diagnosis of hitherto unsuspected tuberculosis.

Diagnose Early.

The early diagnosis makes possible the most effective treatment and if it is used in every case would increase the percentage of recoveries. A series of clinical symptoms invariably precede the breakdown of the tubercles and the appearance of expectoration containing bacilli. When these early symptoms are observed and recognized it is of the greatest importance to inform the patient, and it should be made the especial duty of the attending physician. Wilfully hiding the truth, withholding the knowledge from the patient of his true condition, misleading him and substituting terms that denote disease of little gravity is criminal to the patient and dangerous to the community. No one can fathom the longing

hope or alternative deep despair of those who were told of their danger, but he is brave who dares to tell.

Pasteur says: "It is in the power of man to cause all parasitic diseases to disappear from the world." Knopf, of New York, says: "To combat consumption as a disease of the masses successfully requires the combined action of a wise government, well trained physicians, and an intelligent people." This disease is certainly known to be curable and we should not, therefore, in any way delude or deceive the victim. The public must be aroused, apathy is the greatest factor in the dissemination of infectious diseases.

A few years ago Jenner thought to test an old-folk remedy against the greatest scourge of that day. Koch has solved the problem how to prevent the spread of tuberculosis just as readily as did Jenner that of small-pox, and after days of toil and investigation he has brought to us the greatest of all benefits to mankind.

Tuberculosis may affect any organ of the body, as the glands of the neck, joints, membranes of the brain, intestinal canal, skin and throat, and any of the tissues of the body. It is the same disease in any of these locations and is produced by the same specific bacillus. When conditions are favorable, they grow and multiply and produce the tubercles which soften and discharge, throwing off the germs that endanger the lives of other living bodies. These germs multiply only in the living body, never outside, differing from other infectious diseases, consequently, the infection must be from the identical tubercle bacilli which have been thrown off.

Sixty per cent. of all cases in man have been proven and can be traced to a human source of origin, such as intimate contact with relatives having tuberculosis, living in the homes with consumptives, or occupying homes which had been occupied by consumptives. The media through which animal tuberculosis is disseminated to human beings are milk, butter, cheese and meat.

Must be Located.

"To conquer an enemy we must first locate him." Therefore it should be necessary that tuberculosis be placed on the list of reportable diseases and that physicians be required to report to their various Boards of Health every case of tuberculosis coming under their observation. The object of making these reports is to locate the foci of infection, to give such instruction as the patient may need for the care of himself and the protection of those who associate and come in contact with him. Rigid laws in regard to promiscuous expectoration

should everywhere be passed and enforced. Every particle of tubercular matter should be disposed of the moment it is thrown off, and there should be no soiling of the hands, mouth, beard, clothing, bedding, furniture, or place in which the patient resides. "The consumptive who is immaculately clean cannot re-implant the disease in himself nor convey it to others."

Tuberculosis is said to be largely a disease of the poor, but there can be amidst poverty the sweet atmosphere of purity and cleanliness. Sunshine and fresh air are strangers to many people. It was Knopf, I believe, who said that the best antitoxin for consumption was the trinity of fresh air, sunlight and water. When we consider how many homes are closed against the life-giving rays of the sun, made dark and dreary, no ventilation, filthy carpets that have been on the same floor for the fourth of a period of a human life without being cleaned, evidences of indiscriminate spitting against indefensible walls, bed clothing that has been so carefully stacked away in dark corners till the odors of the grave are emitting therefrom, such a place serves for a hotbed for this disease, and the threshold lay vanished before an enemy who is striking from the dark. The association with consumptives is not dangerous nor is there any danger in allowing them to go abroad, if the expectoration is carefully managed and the germs therein destroyed; and the expectoration becomes dangerous after it has dried and the germs liberated. It is a well established fact that these germs in their dry state are active and remain active for months.

It is of the utmost importance that the proper authorities in all communities should specify the method and manner of destroying these germs, to educate people as to the manner of disinfecting; to show how the germs are set free; to show the danger of expectorating in places and allowing it to dry and be blown hither and thither, sowing the seeds of death broadcast.

There are many ways to avoid consumption. In the consumptive home the patient should expectorate on pieces of soft paper or cloth and burn it, or should be received in the cup in which powerful disinfectants, as corrosive sublimate and hydrochloric acid, are contained. Every patient should sleep alone and in a well ventilated room. Rooms should be swept with dampened brooms. If living in the same house with a consumptive, avoid eating out of the same dishes unless they have been thoroughly boiled.

Facts of Hygiene.

House light undoubtedly plays an important role in tuberculosis; it prepares soil for

the tubercle bacilli, indeed the house is the granary. It is the place where the new host gets his implantation when he fades and dies.

Sunlight and outside air are essential. Never eat without carefully washing the hands. Stomach troubles are predisposing causes of tuberculosis and should be remedied at once. Healthy digestion and perfect assimilation are guarantees against consumption. Good health protects against the tubercle bacilli, but this must not be weakened by dissipation and excesses.

Proper inspection of slaughter houses and dairies to protect against tuberculous meats and milk should be established.

A latent tuberculosis is often aroused by a cold, therefore colds should not be neglected. Avoid mouth breathing, and respiratory exercises should be moderately practiced in open air daily. The cold bath should be encouraged, especially do I urge the salt bath; this will keep up the tone of the body circulation. Live outdoors as much as possible. Leave the windows wide open at night, do not be afraid of night air. Let the sun have full sway in the home. Take plenty of nourishment, rest and sleep.

Consumptives should protect others by going to the sanatoria, but in doing this, if poor, they should be supported by the whole people, those they protect.

In conclusion, let it be impressed that no new case of tuberculosis can arise without an old one, and as we are looking to the means of stamping out this disease, let us not in the hour of our triumph, in our eagerness to forever keep subjugated a fearful foe, lose sight of those who have advanced to that pitiable state beyond all hope of cure.

Let States and municipalities at least provide them shelter and place to die in peace. While we have not within our grasp a specific to cure advanced consumption, we have it within our power to erect homes, hospitals, and sanatoria, where rest, cheer, and hope may be given; for those under the shadow of despair might be brought back to the semblance of health and trained to habits and methods which make them harmless to others.

Picture the long-drawn battle, the emaciated, weak and gaunt form of a once robust manhood. Who can understand the despair of those dying with this disease; who can understand the joy created by a hope of release from its bondage, or by comforts withheld by poverty except he who has drunk deep its dregs?

Let us go forth then and try to arouse sympathy, create interest in this great work and disseminate knowledge that will ulti-

mately banish from the world "the great white plague."

President: The next paper is by Dr. Rankin, of Wake Forest. Is Dr. Rankin here?

Dr. Bolton: I saw Dr. Rankin last night, and he said it would be impossible for him to be here.

President: I am sorry Dr. Rankin is not here, because we are all curious to know what that remedy was. We may all have used it when we were children.

Is Dr. Crawford present? If not, then, gentlemen, we have completed the program for this Fourth Annual Meeting, the first independent meeting, and I must confess that when last fall or spring, at Winston-Salem, five men came together, and being one of those five men I was elected as President of the North Carolina Society for the Prevention of Tuberculosis, I did not think very seriously of the honor that was conferred upon me at that time. I must confess that. I realized the responsibility of the position to which I had been elected, but I was not overwhelmed with the feeling of honor, because of the small number present. I have grown very much puffed up since that time, especially since I have been at Charlotte. I once said when I was elected President of my own county medical society that I considered it the proudest moment of my life that had I been elected to that. I am equally proud today to have been President of an organization that has shown the wonderfully good work, interest and enthusiasm, the unselfish interest that has been manifested in this meeting, and I want to thank you as President of this Association for your coming here, and for having made this meeting the great big success that it has been. I thank you. (Applause).

Dr. Lewis: Occupying the official position I do, as the secretary of the State Board of Health, I feel I ought to express my gratification at the success of this meeting, and also to express my pride in the fact that I was one of the four that elected our most excellent President. It has been a meeting of inspiration, of strong, valuable and interesting papers, and the amount of interest and enthusiasm certainly means better work in the cause of the promotion of public health. I don't know of anything that has occurred in years that is so likely to promote it as this session, and I feel that the people of the State have just cause to congratulate themselves upon the inauguration of this movement.

Dr. Minor: In an official capacity this time,—I chance to have the honor of being a director and Vice-President of the National Association for the Prevention of Tu-

berculosis, which has been endeavoring to wake up and organize societies of this kind all over the country. Dr. Farendon, the Secretary, has it deeply at heart, I do not think there is any State Association that has been organized that certainly can surpass or touch what this Society has done at practically its first meeting. I have attended every meeting of the National Association. I was at its organization meeting, and many of us here have attended its different meetings, and I say it deliberately and mean it that no meeting of a National Association gave better papers in quality or enthusiasm, active or real, than the interest we have had here. They had more papers, and clinical, surgical and sociological sections. Of course, we have lumped them all in one, but I am frank to say from my experience that our meeting will stand up abreast, not in size, of course, with anything that the National Association has done. We are, I think, starting off in the North Carolina way. I think we have got a good organization, and one that need not be ashamed of itself among its brother associations of the same size throughout this country. We have our campaign ahead of us. We are going to do something. We have an interested, wide awake and enthusiastic profession who know what to do. We have a splendid opportunity, and I look for a splendid and glorious future.

Dr. Lewis: Allow me to supplement my remarks. What I intended to say was really to express my appreciation, that I am sure we all appreciate, of the tremendous work that has been done by our Secretary. I entirely agree with you, sir, that the credit for the success of this meeting is due practically wholly to the unselfish, self-sacrificing efforts of our valued Secretary. I want to be put on record as expressing the appreciation of the representative of the State Board of Health for this splendid work that he has done.

Dr. McBrayer: I appreciate very much the nice things that have been said about our President, my fellow townsman, and there is nothing too good to say about him, but I want emphasize the remarks that Dr. Lewis has made about the Secretary. I feel from my experience with him that if he has treated everybody like he has me, that a large part of the credit for the papers that have been presented here is due him. He sent out his stereotyped letter, and asked me to write a paper. I wrote back and told him Dr. Minor and Dr. Dunn were doing all the advertising of that kind from our town, and I didn't care to write one. He wrote back and said he would not accept any such answer as that. In a short time I got another letter asking, "Please send

title of your paper," and in a few days I got another. I replied, "Just to keep you from writing so much, here is the title of the paper, but I don't promise to read it." I have had several letters from him since that date. I just mention that to show that he certainly deserves his share of the credit for the success of this meeting, and I for one, and I know all the members do appreciate his efforts.

Dr. Badger: Since I have been here, I have heard from some members, perhaps several, that the negro was a great disseminator of tuberculosis in this section of the country. I have not heard anything said, I think, directly or indirectly, by which the negro doctors could be interested in helping us stamp this out. Now, of course, this is a starting point, and we will reach them later on, but it seems to me that something should be done to interest the negro doctors of our State in this work. We may stamp it out, but the negro and the negro doctors are their followers,—for they are doing the practicing now to a great extent for the negro laymen,—we may go ahead and stamp this out, but they will come along and spread it faster than we will stamp it out. The better negroes in the profession in this State would gladly join in this and help stamp out tuberculosis. I do feel that it is the duty of this Society to show the negro doctors some courtesy, to show them some plan to help out in this or give them some work, and I don't think we ought to leave this place without formulating some plan by which we can get hold of these negro doctors and get them started out, for they do feel a delicacy in coming in here.

Dr. Minor: That is a good remark. I am a Southerner and love the South, and I am a white man, but I have no race prejudice of an abnormal sort, and I have seen the work those people are doing. We have in our towns some excellent men, and others throughout the State; and I think unquestionably in a fight of this sort we ought to put aside the prejudice that so often exists, and it seems to me what he says is true, that they ought to be able to come here. I know the difficulty involved, and I don't know if we can do it. They have got an enormous task. At the last International Association a young negro doctor got up and spoke of the terrible difficulty he had in teaching hygiene to his people, and I hope some one here can suggest some rational and intelligent solution of that subject.

Dr. Lewis: I think the suggestion is a very valuable one, indeed, and I suppose I am as familiar with the negro doctors as almost any one, and they are undoubtedly

doing good work, and they are vitally interested in this problem. The negro is a menace to their own population. The social difficulties are so great that I don't see very well how you can manage to mix up, but I think it would be well to pass a resolution asking them to organize an auxiliary association for the prevention of tuberculosis.

Dr. Minor: Dr. Faison spoke of this in his paper. We would like to hear from him.

Dr. Faison: I just want to say that it was one of the requests in my paper, the first paper read in this association.

President: Will somebody put this in the form of a motion?

Dr. Lewis: I move that the colored physicians of the State be requested to organize an auxiliary association for the Prevention of Tuberculosis, and that they be sent the transactions of this Association.

Dr. Faison: I second that motion.—Voted.

President: If there is no other business, I will entertain a motion for adjournment.

Dr. Minor: I most regretfully move that this first real meeting of this Association, now stand adjourned.

President: Before we adjourn, one more thing has been suggested by a number of men, and I don't know whether it is a wise thing or not. The suggestion has been made by a number of men, and I give it to you for consideration. It seems that this meeting has been so largely a sociological one, and in spite of everything once in a while something of a scientific or medical nature would creep in, and it has been crowded out, and it has a sort of wish of some members to consider the scientific or medical side of of the subject entirely away from the tuberculous side. Others have felt that everybody was satiated and they had had so much; and the trains were going away, it wouldn't be possible to have such a meeting. If it is desired to have such a meeting to discuss the treatment of tuberculosis, we might consider it while Dr. Julian is getting his money. Adjournment.

Response to Address of Welcome.

By Dr. D. A. Staunton, of High Point, N. C.

Mr. President and Gentlemen of this Association:

It is indeed with unfeigned embarrassment that I undertake to speak before this assembly, which though small, is one that I imagine and feel is critical, and yet while I feel this embarrassment, I also feel that it is a true pleasure to me to respond to the very elegant address of welcome to which we have just listened.

I say it is a pleasure because I feel that in making this response I echo the opinions

of a representative body of a noble profession. I say representative because I have looked over the programme gotten out by our worthy Secretary, and I see the names of many whom I know to be workers in the field of science, that science which has for its object the alleviation of human suffering and the prolongation of life.

The word "welcome" falls pleasantly upon the ear of all mankind and especially so to the medical man, and when his honor, Mayor Franklin, told this convention that it was welcome to Charlotte, we believed him. The most of us have been here before on like occasions, and we have learned from experience that the people of Charlotte say what they mean and mean what they say, and always make good.

For weeks we have had our eyes set on Charlotte. We have anticipated this visit with much pleasure.

We are truly glad that the time and occasion have arrived when we can partake of your hospitality. To be here is not only a pleasure but an inspiration as well. Since the earliest dawn of her proud history Charlotte has been to a great extent to North Carolina as a city set on a hill, something of a guiding star. Her educational facilities are scarcely excelled by any city in the South.

Her industrial development is an example that all would do well to follow. You are a busy people, but you have not allowed your time to be so completely occupied that you have neglected the poor and needy. You have without doubt learned the lesson of the Good Samaritan in the broadest sense. Your numerous hospitals emphasize the fact that you have long ago accepted in a practical way the Divine Injunction, that you are your brother's keeper.

Your splendidly equipped Dispensary, and Medical College, attended to and presided over by your most distinguished physicians, not only makes Charlotte a medical center, but they stand today as a lasting monument, more enduring than marble to your clarity and philanthropy.

I regard it as peculiarly fitting that this, the first regular meeting for the Prevention of Tuberculosis in North Carolina, should be held in this historic old city. Here, where more than one hundred and twenty-five years ago with that independence of American manhood which has always characterized the Anglo-Saxon race, your fathers, rose in their might and said, we will be free from foreign oppression. The American people are confronted today with a more serious proposition than whipping the British, as they did one hundred and twenty-five years ago.

This convention is the beginning in North

Carolina of the battle against tuberculosis, which I trust will not relax in its energies till we have reduced the death rate from one out of every seven to nothing, and then, and not till then, will our people be free from the greatest of all foes.

The war, my fellow practitioners, against tuberculosis, has just begun, and the result of the battle lies largely with us. If we appreciate our position as we should, victory will come to an appreciative people.

Work, is the word that comes nearest expressing to my mind the life of a physician. Not the work of blasting the foundation of mother earth from her slumbers of centuries, and converting it into material with which to build the smooth highways that the wheels of commerce may run more smoothly and swiftly; not the work of piling one layer of masonry upon another till we see in our midst a sky-scraper office building that the ground floor may not be crowded, but that the men who sit at the desk working out the problems of the age may go higher and higher in God's pure atmosphere where dust, smoke and germs do not abound, and where an abundance of ozone renders living sanitary; not that work which gathers from the fields and forests the raw material from which useful domestic articles are made, but our work is to burn the midnight oil, to strain our eyes looking through the microscope, advocating better sanitary conditions, and imparting to the public a knowledge that will tell them how to live that their days on earth may be longer and their lives made more useful by reason of living better.

Permit me on behalf of the Society for the Prevention of Tuberculosis in North Carolina, to thank you most cordially for this royal welcome. We are delighted to gather here under your vine and fig-tree and enjoy your courtesies. The doctors of North Carolina are a hard worked and poorly paid set of men, and when we absent ourselves from the tread-mill of our vocation and gather on occasions like this, and hear the pleasant encomiums from honest hearts, as we have today we gather hope and inspiration, and when the time comes "when fond memory brings the light of other days around us," I am sure that this occasion will be an oasis in the life of every one who is so fortunate as to have attended this meeting.

Tuberculosis—Consumption—The Aid we as Physicians Need to Successfully Treat Tuberculosis.

By Dr. Baxter Haynes, Cliffside, N. C.

In this brief paper I do not expect to advance anything new in regard to the great dreaded disease—consumption, for it seems

that nothing specific has happened within the last decade; but one great problem has been constantly before me since I attended the International Congress on Tuberculosis which was held in Washington, D. C., from Sept. 21st to Oct. 12th of last year, and that problem is:

How are we to reduce the mortality of this great plague?

This International Congress had a representative from very nearly every foreign country, and from nearly every State in the Union and from nearly every Province in Canada, and to me it seemed to be the greatest gathering of medical men, scientists and laity, in the interest of suffering humanity that ever assembled in America.

The presence of that great Tuberculosis Specialist, Dr. Koch from Germany, was of very great importance and added very much interest to the assembly. Not only was the eminent Dr. Koch's presence of importance but also that of Landusy, Smith and Dr. Detre, who demonstrated the differential cutaneous reaction, was of great interest to the assembly, and many other men of prominence too numerous to mention.

Other things of importance were the interesting pathological specimens, charts, stereoptican views, and modes of all description, devised for the prevention and cure of this disease.

Attending this Congress, seeing these great scientists and specialists, hearing them lecture, giving their stereoptican views of tuberculosis cases and seeing there on exhibition the interest that the world is taking in a disease which is killing about one-seventh of the human family, excited and stirred an enthusiasm within me to join the great campaign which the world is now running with an increasing success to eradicate the great white plague.

Now, what are the most legitimate ways and means that we have, or can devise, to fight this most deadly enemy to man? We can organize tuberculosis county societies, and State societies, and have the International Congress to meet every year, instead of every three years as it now does, and have such specialists as Drs. Koch and Detre to preside and demonstrate, but yet our hands are tied, and we as physicians are powerless to check the spread of this disease without the help of the laity in putting our knowledge into practical use. Therefore we can readily see that it is only under civilization, and civilization of the highest type, that we can have any reasonable prospect of cure.

I haven't the least doubt but that the personnel of the representation of the International Congress spent, in attending this humanitarian convention, one hundred

thousand dollars, yet if we fail, personally, to do our duty to educate the people to that standard of living consistent with hygienic and physiological laws, our time, energy and money are as seed sown on stony ground.

The medical profession of North Carolina can not alone handle this great problem. We must begin this great task in the Capitol and Legislatures of our States. We must get financial aid from our States, and have medical lecturers to go into every town and village to lecture and teach the people tuberculosis and non-tuberculosis, something more about this so much dreaded disease and educate them to see and know their duty, and when we shall have accomplished this we can feel then that we have made a start in the right channel.

We should have educated nurses for the different districts in the State, to go in the homes of these unfortunate victims, and there personally teach them how to live and how not to live; we should have better sanatoria accommodations than we have, for the poor, in whom we find such a large per cent. of tuberculosis cases.

So many of the States have organized societies to fight consumption and the State and society are sending out doctors and nurses to help humanity suffering from this disease, and we should call for just such aid from our State.

New York, Pennsylvania, and Massachusetts are doing the most efficient work, and according to statistics are producing by far the best results and really doing more for the victims of the great white plague than nearly all of the other States of the Union. In New York City in 1881, before they were so organized to fight this battle, they claimed a population of one million two hundred and forty-four thousand five hundred and eleven, and during that year five thousand three hundred and twelve deaths from consumption occurred. In 1907 the population had increased to four million two hundred and eighty-five thousand four hundred and thirty-five, but having become organized and prepared to fight the battle, in that year only eight thousand nine hundred and ninety-nine deaths occurred from this disease; an increase of seven per cent. death rate, while the population increased three hundred per cent.

This effective work is a result of organized efforts of the city and State medical authorities and municipal government, but by far the greatest good was accomplished by the personal work done in the homes of the unfortunate victims by teachers, nurses, lecturers and demonstrators sent out by the many anti-tuberculosis societies which now actively exist in New York.

We need more bacteriologists to make annual or semi-annual examinations of the milk used, and when they find cows producing milk infected with tubercule bacilli, have them to condemn the cow, so far as the milk is concerned. This leads to the great difference of opinion which was so much debated at the International Congress.

Dr. Koch seemed to be thoroughly convinced that tuberculosis can not be transmitted from animal to man. Though nearly all his colleagues differed with him, with the exception of his German friends, who firmly held to Dr. Koch's idea, very likely from a patriotic point of view.

We need more articles contributed to journals and newspapers,—county weeklies and city dailies, and in these articles every medical term put into English, so far as possible, so that people can in rural districts as well as in cities, around their fire side, through the columns of their daily or weekly paper, learn something of their most insidious enemy.

While speaking of newspaper articles, I believe that a great deal of harm is done by the newspapers advertising patent medicines which claim for their result a positive cure for consumption. Though these advertisements brings to papers a few dollars and cents, yet it is robbing the ignorant people of their money and comfort, by buying these quackery medicines which claim so much for relief and yet there is not an ounce of virtue in them all.

We need our good friends, the druggists, to be more conscientious and careful about displaying and advertising these humbugger remedies on which hundreds of cases rely for relief at the very stage of consumption that legitimate prescribing is so much needed. It is in the incipient stage of tuberculosis that the ignorant class of people are buying this kind of stuff, and answering advertisements and letters received from the so-called tuberculosis specialists who are quacks in every sense of the word, and who do not expect to do anything except to get what few dollars they can and give no relief whatever.

In our cities, especially where streets are paved, in factories, work-shops of all kinds, school houses, colleges, court houses and in every place where public meetings are held, we need the anti-spit law and it enforced most rigidly. These factories and shops should be forced to provide cuspidors and the people employed therein forced to use them.

We need a law passed providing some way to partly, if not totally, isolate the infected patient, or make him be more restricted about his manner of living. This will not only help as a prophylactic measure

for other people, but will be a great benefit to the patient himself, for the most dreadful thing that can happen to a consumptive is to come in contact with another consumptive.

It seems very strange, indeed, when we think of the talk, sentiment, and scare that a few cases of the simple contagious diseases, when it makes its appearance in a community, causes; there you see isolation and quarantine and every detail of the law rigidly enforced; and yet these few simple contagious diseases all together are not so dreaded and fatal as this disease we call consumption, which is the most universal scourge of the human race and some form of which kills 150,000 people in the United States every year.

So we need laws passed to isolate and quarantine to aid us in this crusade against tuberculosis and if we live to see these laws passed and then rigidly enforced, and the means sufficient to supply all the needs mentioned in this paper given us and the people, we will live to see the death rate of the great white plague greatly reduced if not entirely obliterated.

The Spread of Tuberculosis and the Causes of so Many Deaths.

By Dr. H. D. Stewart, Monroe, N. C.

Mr. President and Brethren of the North Carolina Anti-tuberculosis Association:

The title of my paper is "The Spread of Tuberculosis and the Causes of so Many Deaths."

I shall divide the paper into part first and part second.

Part first will be made to embrace somewhat in detail the most important factors concerned in the spread of tuberculosis.

Part second will be made to embrace the most important factors that enter into the excessive death rate.

To my mind the whole cause might be assigned to ignorance and poverty. The laity are so grossly ignorant of the cause and the progress of tuberculosis that the disease has every possible chance to flourish and spread unconsciously. The profession often display unpardonable ignorance and carelessness in the diagnosis and management of tuberculosis.

House and Family Infection.

A large majority of cases of tuberculosis contract the disease from living in the house with a patient—sleeping with him, eating out of the same utensils, drinking out of the same cups, breathing the same air, and in the meantime the pestiferous little housefly carrying the contagion from the patient's sputum to other members of the family.

There have been families in my home

county who died one by one of consumption. One member of the family had become infected from some unknown outside source or association. He went home, staid in his poorly sunned and poorly ventilated home. He failed to call a physician promptly, or after he called in a doctor, the doctor let the family rock carelessly along in baneful ignorance of the terrible disease and its consequences. Who was to blame? The doctor in great part, for not insisting on isolation and quarantine of the first patient. The doctor was to blame for not educating the family in regard to the infection and the contagion. The State law was lacking in not providing for isolation and quarantine of the first case. What were the results?

The whole family died one by one from house infection and family spread.

And there are still living in many parts of the country families who are spreading the infection from member to member and to other families who visit them.

The negroes are almost as good carriers of the tubercle bacilli as the common housefly. They sleep everywhere, spit everywhere, eat anywhere, visit and associate promiscuously.

Indeed promiscuous visiting and promiscuous association amongst negroes and amongst low, ignorant whites, seem to be the world over the common cause of the spread of contagious diseases.

The morbid curiosity of the basely ignorant not only leads to the spread of disease, but in many cases greatly hinders the cure.

Every consumptive, every consumptive family and every consumptive house in the United States should be ferreted out and a reliable working record of all these should be made and preserved. Those infected should be promptly isolated or quarantined as in small pox, yellow fever, Asiatic cholera, bubonic plague, typhus fever, diphtheria, scarlet fever and other dangerous contagious diseases.

If it is necessary for the county to spend money and the doctor time and work diagnosing and quarantining small pox, which has lost all its terrors, why is it not far more necessary for the county, the State and the nation to spend money and to make extraordinary effort to discover cases of tuberculosis, and to protect the body social and the body politic against its ravages?

If it is necessary for Oakland and San Francisco to offer three cents a head for rats in order to stop the spread of bubonic plague, would it not be a wise national policy to appropriate thousands of dollars each year to finding and quarantining consumptives, to disinfecting infected houses and buildings and for providing food, clothing and nurses for the consumptive poor?

There is possibly even a chance yet for Rockefeller, Carnegie, and the other great millionaire robbers who have waxed fat by strangling infant industries and gathered in the wealth that the masses have produced to save themselves from the waiting hell by giving back the money to provide food and raiment and nursing for the indigent poor dying of consumption.

The undertaking of stamping out tuberculosis is a task for the States and the national government. It is entirely too stupendous for anti-tuberculosis societies and the various other organized forces that may undertake to starve out the disease.

The societies for the prevention of tuberculosis may accomplish much and may carry on the work so perfectly in the cities and crowded centres that there may seem to be no vestige of the disease left, no more foes to conquer. But far back in the villages and in the rural districts there will be thousands of neglected foci of infection. Miss Smith, Miss (Mrs.) Jones, Miss Helms, Miss Alexander, Miss Crook and Miss Belk will still visit and dip and pass the cup from lip to lip.

Only government expenditures, governmental inspection and disinfection and enforcement by the States and the nation of a rigid quarantine can complete and perpetuate the work of extermination. Individuals cannot, will not, stamp it out. Medical societies can enlighten, educate, advise, suggest and plan, but they alone are comparatively helpless in the fight. There must be compulsory education, especially along the line of public health.

Consumption must be preached in the pulpit, taught in our schools, read and discussed in our homes; lectured upon in our lecture halls; it must be stamped, stained, printed, painted in every school house, every church, every theatre, every factory, every tenement house, every steamship, every train, every street car and at every public fountain.

It should be made a fad and a fashion to read about consumption, to talk about consumption, to get well of consumption and to help others to get well of consumption.

Charitable women who long to be called blessed and those who much desire plaudits from the press must get it into their heads that the work of fighting tuberculosis will bring notoriety and social preferment to them, and that Mesdame So and So has already caused considerable comment.

The government should broadcast anti-tuberculosis literature throughout all the cities and to the farthest limits of the rural routes.

Every school should have a daily lesson in public health and the care of the health.

Ignorance of Physicians in Regard to Tuberculosis.

Many physicians are woefully ignorant about the diagnosis as well as to the handling of tuberculosis.

As a consequence many cases are treated for indigestion, dyspepsia, female trouble, kidney trouble, typhoid fever and malaria until the disease has gotten a desperate hold upon the patient and many others have been exposed to the infection.

I have known physicians to treat tuberculosis for typhoid fever for weeks. All this time the disease was getting absolutely beyond remedy and the patient losing every chance of recovery. All this time the other members of the family and inquiring friends were being exposed to the dreaded tubercle infection.

And the doctor in charge, though ignorant of the diagnosis, remained self-satisfied, refusing a consultation and risking the life of the patient rather than to risk his own reputation as a diagnostician. Thus we see that early diagnosis and careful management are the most important points of all in preventing the spread. And when the patient or the family calls a physician in time the responsibility is shifted to the physician.

Influence of old Prevailing Ideas in the Spread of Consumption.

With many people there is an old traditional idea that consumption is incurable. The doctor, the family and the friends desert the patient to his fate. They give him no encouragement whatever as to recovery. They pass the time in a careless, do-nothing way instead of buckling down to the business proposition of curing the patient. The same peaceful, undisturbed ignorance that leaves the victim to his fate allows others nearby to be unconsciously, and without warning, exposed to the infection.

Some, very many, tubercular patients are slow to acknowledge that they have consumption. Consequently the cure is greatly hindered and the spread more likely to occur.

Influence of lack of Parental Care and Training of Children.

Mothers fail to teach their girls, and fathers fail to teach their boys about the natural functions of the body. At that sensitive, tender age when girls are just blooming into womanhood the mothers should teach them the right meaning of the transition. They should teach them the dangers to health that befall this particular age. They should teach them how to care wisely for the body to prevent physiological conditions from merging into pathological conditions.

The girl and the boy should both be taught

the plain, unvarnished truth that the early vices of the body will render them an easy prey to disease.

There is a sad neglect of the physical development of our boys and girls. Parents do not give sufficient attention and thought to the physical training of their children. They let them attend school to have their minds stuffed with the rudiments. Frequently the child cannot learn because of some physical defect or deficiency. Then both parents and teacher should show interest enough to try to discover the cause and to seek a remedy.

Fruits, Vegetables, Meats and Public Drinking Cups.

No individual should be allowed to dispense fruits, vegetables, meats or groceries, unless he has been inspected and is known to be absolutely free from all contagious or infectious diseases.

Every fruit dealer, every vegetable dealer, every meat cutter and wrapper, and every clothing maker should be inspected and a health certificate furnished in form. The inspections should be made decently and in order, too, and not after the fashion of political graft.

Once in New York City on a downtown street a consumptive Italian had a fruit stand. He was in the habit, after the fashion of his kind, of spitting on a cloth and rubbing his apples to make them glossy and tempting. Many school children passed his fruit stand daily. Many school children bought fruit infected from the Italian's saliva. The result was an epidemic of tuberculosis amongst those school children.

When it comes to eatables both the sellers and their goods should be regularly inspected.

Individual drinking cups should be required by law at all public fountains, on trains, steamships and at all communion tables. Many a case of consumption has been contracted at the soda fountain, at the public restaurant, at the public water tank on train or on public square and at the table where the sacrament of the Lord's Supper is administered.

Spitting and Trailing.

It is a bad, unclean practice to spit in public places. It is extremely dangerous to the public health for a consumptive to spit anywhere except into a cup containing carbolic acid or some other disinfectant.

Frequently women trailing long skirts on the sidewalks carry disease germs into their homes. It is becoming very stylish as well as a sanitary necessity now to wear short skirts.

Cigarettes, Wine, Women.

Cigarettes undermine the constitution of

Persistent Coughs

too, often indicate inability of the organism to re-establish a nutritional balance. Here is where

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has its greatest value—the restoration of metabolic equilibrium. This it accomplishes by improving digestion, increasing absorption and assimilation, and promoting functional activity throughout the body.

Coughs, fortunately, usually disappear as atonic conditions are overcome.

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RESISTING FORCE. The treatment, control and cure of tuberculosis, especially in the incipient stage, is generally conceded to be a matter of rest, fresh air, sunshine and proper diet. Ofttimes—a patient needs help,—to keep up body warmth and supply new—resisting force—to the blood.

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because of its great ability as a nourishing tonic and blood replenisher, is peculiarly adapted to—supply this needed help—and—resisting force. Its great—palatability—overcomes in most cases—the objection—and—solves the problem—of administering Cod-liver Oil.

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An efficient preparation for those needing Cod-liver Oil, superior to Iron, bitter tonics or the prevalent alcoholic extractives.

See—"New and Non-Official Remedies"—
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thousands of boys and young men, and the tubercle bacilli find easy victims.

Alcoholic excesses render those who have indulged helpless in the fight against tuberculosis.

Sexual excesses and marital excesses consign many to the grave.

The unfortunate inmate of the bad house goes to her grave by the consumption route because in the evil practices of the place—cigarette smoking, drinking alcohol and sexual excess—she has sacrificed well-nigh all her resisting power. Death has long since marked her for its own. Her average life is but five years.

Dust.

The dust that is inhaled in cotton factories, oil mills, grist mills, various powder mills and other manufacturing plants is a fruitful cause of consumption.

The dust being constantly inhaled, causes a chronic catarrhal condition in the lungs and those who are poorly-nourished or are weak from other causes, easily become infected with tuberculosis.

In following up the work of prevention and extermination the conditions in our factories and the living conditions of the operatives will require much attention.

Why do so many people die of consumption?

Ignorance, slow diagnosis and careless management on the part of the profession. The chance of a cure is lost in the slow or mistaken diagnosis. The spread to others comes then, too, from the same ignorance and carelessness.

Why do so many die? Ignorance on the part of the laity, scarcity of oxygen, lack of nourishment, poverty and its attendant evils, failure to promptly get down to earnest combat. Why do they die? Because they try every patent medicine under the sun, believe every patent medicine lie they can find in almanacs and religious papers.

Patent medicine makers and sellers are responsible for the death of many a poor ignorant consumptive. He has lost his chance and the grim monster has gotten a death grip while he moped darkly and ignorantly along listening to and heeding every other adviser except a competent physician.

Tuberculosis in its cause and its spread seems to be a disease of the poor or of the masses. This is due to the fact that the poor are crowded together in tenement houses with poor ventilation and insufficient oxygen, crowded in factories and workshops. Often they are poorly clad and are poorly nourished. Their conditions of life throughout seem to favor the infection, the development and the spread.

On the other hand tuberculosis in its care and its cure seems to be a disease of the

rich. The very fact that it is usually a chronic disease of long standing, requiring months and years to effect a cure, favors its spread and renders it harder to cure and very expensive. Often patients give up in despair because they have tried against poverty and many discouragements to get well. Rather than prolong the struggle they give themselves over to a greedy Death. There are certain things which have made the treatment and care of the consumptive much more expensive than they ought to be and the cure much more difficult to effect.

High-Priced Service in Sanatoria.

Just here I shall probably strike a discordant note with some of my conferrers. Sanatoria must be established and maintained on an economic basis. I have known patients to go to Sanatoria and spend all the money in sight and return home worse than when they went. Their last estate was worse than their first.

The proprietor of the Sanatorium professed expert knowledge and his excuse for excessive charges was that he had a special treatment, unknown of course to the profession at large. As a rule his expert treatment is not worth a hoot in tarnation. Often the results are disastrous both to the patient and to his estate. He would fair far better in the piney woods with a good nurse and within easy reach of several good cows and many good hens.

The doctor does his patient an unpardonable wrong to send him off into a far country or to a distant Sanatorium to yield up his pocket book and finally to yield up the ghost. Of course there are exceptions. There are some cases with strong heart and strong stomach that will recover in a high, dry climate better than they would at home. But these are greatly in the minority. If the doctor is called or consulted in time and diagnoses the case in its incipency, he can cure the patient at home. If the case is not discovered till the last stages, the chances are against the patient, at home or abroad.

Summarizing Briefly.

Every case should be discovered and diagnosed in its incipency and the treatment should be pushed after the most approved plans.

Second. The cost of isolating and treating patients must be reduced to a minimum.

Third. The Lord provides oxygen and the government must provide diagnosis, food, raiment and nursing for those who would otherwise be neglected. It takes money to get well of consumption. Let it not be said of any citizen of our land that "he was too poor to get well."

Fourth. Compulsory disinfection and fumigation of public buildings, offices, factories, tenement houses, street cars, sleeping cars on trains, on steamers, Every infected house must have compulsory fumigation.

It would be a good plan to have compulsory disinfection of every house in the land once a year. I must admit that from present prospects there is more theory than practice in the suggestion. But theory is the parent of practice and it requires many theories to produce a few good practices.

The health of her citizenship is the State's most valuable asset. To lengthen the average life of her citizens the State must look to the public health. Money spent along this line will return after many days with a more sturdy robust manhood and womanhood.

Why does Germany lead the world in physical and intellectual vigor? Because she has compulsory sanitation, compulsory education, compulsory physical training and compulsory trade or occupation. But for cigarettes, fast women, beer gardens and the disadvantages of poverty the Germans would all die of old age.

Only one million dollars was spent last year in the United States in the fight against tuberculosis. Such a small, paltry sum to invest in so great an enterprise. It is not enough to have paid for the publication and the distribution of the literature that ought not to have been sent out.

Reports of Virginia Hospitals for Insane.

The annual reports for 1908 of all the Virginia State Hospitals for the Insane have been printed and issued to the public. All the reports are replete with statistical information, showing the number and character of inmates, and also pointing out general conditions at the respective institutions.

Since the last annual report of the Southwestern Hospital Dr. A. S. Priddy has resigned as superintendent on account of ill health, and he has been succeeded by Dr. J. C. King, who was for some time assistant superintendent.

All the reports are illustrated with engravings, showing various interesting features of the institutions, and they also contain many tables, with reference to appropriations, and disbursements.

Memorial Hospital.

John W. Gates has donated \$100,000 to the city of Port Arthur, Texas, for a memorial hospital to his mother, Mary Gates, who died there recently. Instead of giving a lump sum to the city and calling on Port

EVERY DOCTOR NEEDS

A Powder

Very inexpensive which, when dissolved in water, makes a pleasant, non-irritating non-poisonous lotion, not staining the

linen, and which has a Specific Action against those peculiar pathogenic germs which infect the Genito Urinary organs Male as well as Female, hence is a

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Leucorrhea Gonorrhea and Gleet

If intelligently used, according to directions in will relieve all cases, including the acute cases and the stubborn chronic ones as well. Also very effective in Pruritus of the genital regions.

Its use is most agreeable to the patient, affording quick relief and proceeding steadily to a cure.

The formula together with bacteriological and clinical potency of the preparation is furnished the medical profession.

A two-ounce box of TYREE'S ANTISEPTIC POWDER enough to make two gallons of antiseptic lotion will be sent Free. This would make about Seven dollars worth of the usual bottled antiseptic solutions. This is all pure capital—you pay for no water. You can take it with you—no liquids to carry.

J. S. TYREE, Chemist, Washington, D.C.

Arthur for a yearly tax to maintain the institution, Mr. Gates specifies that \$25,000 shall be used to build the hospital, to be known as the Mary Gates Memorial Hospital. The remainder will be used in the construction and equipment of a large commercial college, the proceeds of which are to go the maintenance of the hospital. Any surplus is to be used for additions to the hospital and the school. The city has granted lands from parks for sites for the buildings, which are to be begun in four months and completed in one year.

Madison County (Ala.) Medical Society.

At the regular meeting of the Madison County Medical Society held Jan. 12th in Huntsville, Ala., the election of officers of the society and those under control of the society resulted as follows: Dr. James L. Darwin, President; Dr. L. L. Wilkie, of Madison, Vice-President; Dr. Edgar Rand, Secretary and Treasurer; Dr. Felix Baldrige, member of Board of Censors; Dr. James F. Burnam, County Health Officer; Dr. O. B. Patton, Jr., City Health Officer; Dr. W. W. Haden, Jail Physician; Dr. Walker, Poor House Physician; Dr. B. E. Graham, City Health Officer at Gurley.

Dr. Jones Elected Chairman of Health Board.

At a meeting of the Board of Health at Jackson, La., the following members were present: Dr. J. W. Jones, S. E. Slocum, M. L. Wren, D. H. Taylor and R. S. Austin. Dr. J. W. Jones was elected chairman and R. S. Austin secretary. Dr. Jones was for a long number of years superintendent of the Jackson Insane Asylum of Louisiana, and is to-day, at the age of the eighty-two, one of the most active and energetic citizens of this place.

Patrick Henry Medical Society Meets,

The Patrick Henry Medical Society met at Martinsville, Va., during the second week in January. The meeting was largely attended by the doctors from adjoining counties. Papers were read by the following doctors: Dr. R. S. Martin, Stuart, Va., Dr. J. M. Shackelford, Martinsville, Va., Dr. M. S. Martin, Stuart, Va., and Dr. J. R. Perkins, Spencer, Va. The following officers were elected for 1909: President, Dr. M. S. Martin; Vice-President, Dr. W. W. Morris, Preston, Va.; Secretary and Treasurer, Dr. J. R. Perkins, Spencer, Va.

Richmond Academy of Medicine and Surgery.

Two interesting papers were read and discussed at a recent meeting of the Richmond Academy of Medicine and Surgery. Dr. Jacob Michaux read the first paper, his subject being "The Relations Between Druggists and Physicians." "Paranoia" was the topic of a paper by Dr. B. R. Tucker. Both papers were discussed at length by the members of the academy.

Drs. Nowlin and James McCaw Tompkins were elected to membership.

Surgeon of Soldiers' Home at Johnson City.

Dr. J. C. Butler, of Mountain City, Tenn., has been appointed chief surgeon of the National Soldiers' Home at Johnson City, Tenn., as the result of the recommendation of the managing director of the home. Dr. Butler is a promising young physician, and will into the new work enthusiastically.

Tuberculosis Hospital.

Bills were introduced Jan. 18th in both houses of the Tennessee Legislature providing for the establishment and maintenance of a State tuberculosis hospital and a juvenile reformatory. The bill designates the Herbert Domain as the site for both. In both cases commissions of five are provided and the sum of \$100,000 is appropriated for each.

Leprosy in Texas.

Three cases of leprosy are officially declared to exist in San Antonio. It is said their presence will, in all probability, lead to the establishment of a State colony for lepers.

State Health Officer Wm. Brumbly has taken the matter in hand and the State Legislature will be urged by him to make provision for caring for the lepers.

Dr. Wiley K. Fort, of Fort Davis, Ala., died of his home on January 6th. He was born in Darlington, S. C., in 1833. In 1850 he moved, with his father, to Macon county, Alabama. He was graduated in medicine from the University of Pennsylvania, and when the war came on he was appointed surgeon in the Confederate Army, and was stationed at Charleston, Savannah, and Mobile. After the war closed he settled in New Orleans, La., where he practiced for thirty years. His skill in the treatment of yellow fever was so exceptional that the United States Government appointed him as special physician at Puerto Cortez, Central America, to investigate conditions, and stamp out the yellow fever there. After a few years in this work his health failed, and he returned to Alabama, and made his home there until his death.

Dr. Chas. Cecil Stockard, a very eminent physician, and founder of the Stockard Sanatorium, of Atlanta, Ga., died almost suddenly, at his home on Crew street, several days ago. Affection of the heart was the cause of his death. The body was taken to Columbus, Miss., where the interment was made in the family cemetery.

Dr. Stockard was fifty-five years of age when the end came. He was born in Columbus, Miss., July 24, 1853. He attended the University of Nashville, and later studied in Vienna. Since 1892 he had been located in Atlanta, where he was very popular as a practitioner.

The deceased was widely known, and news of his death will be received with keen regret.

Dr. W. S. Edwards died at his home, eight miles north of Siler City, N. C., on Jan. 15th. He had been in failing health for several months, but was not compelled to give up his practice until a few weeks ago.

Dr. Edwards was a graduate from the Jefferson Medical College, Philadelphia, and had been practicing medicine for more than fifty years. He was a very successful practitioner, and his death is a sad loss to his entire community.

The Charlotte Medical Journal.

VOL. LIX

CHARLOTTE, N. C., MARCH, 1909.

No. 3

The President's Annual Address at Tuberculosis Convention.

By Dr. W. L. Dunn, Asheville, N. C.

In our efforts to educate the public to a realization of the infectious nature of tuberculosis it is not strange that in some cases we should have over-reached ourselves. When we stop to consider how slowly the members of the medical profession, with all their advantages of education, training and observation, accepted the fact that tuberculosis was a transmissible disease, it is not surprising that it was difficult to win the acceptance of that fact from those whom it was most important to reach, the so-called submerged tenth. Indeed, it is doubtful if the medical profession *would* have accepted it when they did had not at that time bacteriology been the fad. It was not an easy problem to make the cultured, not to speak of the ignorant, give up their firm convictions, the result of centuries of toleration of the presence of the disease and of an abiding faith in its heredity—all classes had gotten their ideas of infection and of contagion from such familiar diseases as small pox, scarlet fever, diphtheria, measles and cholera where a short period of incubation of 5 to 14 days existed between known exposure and the onset of the disease;—in tuberculosis the period between exposure and manifestation of symptoms was so long that it was not only difficult to establish the relationship, but in many instances the exposure was so far removed that it was entirely forgotten; again, relatively few of those who had lived for years in daily contact with the disease developed it, especially in families of the better classes where ordinary decency obtained. The relationship between culture and the relative infrequency of contagion, because of better sanitary conditions in this class, was not materially different from that between the ignorance and the more frequent infection, because of bad sanitary conditions, in the lower classes.

What was the result? Life was being taken on every side by a scourge beside which cholera, smallpox and bubonic plague were mere trifles. The people did not realize its danger; they had allowed themselves to be bound hand and foot by the superstition of heredity; they had no more idea of their ability to stop it than to avert droughts and floods, earthquakes and hurricanes. Under these conditions surely only extraordinary methods and superhuman effort could bring that realization which the gravity

of the situation demanded should be quick.

The ignorant must be educated in terms with which their minds were familiar,—kindergarten and pictorial methods became necessary because these they could understand. By such measures accurate impressions are rare and if the desired result is to be obtained, exaggerated impressions must become the rule. And such was the result.

These methods in their turn had their effect upon those who advanced them. Just as the oft repeated lie becomes truth to the teller, so did these oft repeated exaggerations become a part of the belief of those who taught them. Then, too, methods intended only for the ignorant had their effect upon the ignorant-cultured, cultured in letters and manner but ignorant upon this subject. I am inclined to believe that in many instances the effect upon those in this class was to give them even more inaccurate and more exaggerated ideas of the dangers of infection than those given to the lower classes. And all this was a necessary accompaniment of such revolutionary propaganda. Just as every great movement of religious reform has developed multitudes of religious fanatics, so has this great educational reform developed a host of phthisiophobiacs who threaten to endanger the very purpose for which the reform was undertaken.

In our frantic efforts to obtain quick results we have set into motion a great ball. The force which started it is totally inadequate to stop it; unless we can now influence its direction it will destroy everything in its path. It seems to me that we must now use every effort to so modify the lesson we have taught that a more accurate idea of the danger of the disease may be given, in order that the next great and legitimate advance in our fight may be successful, the leading back to health and good citizenship of the early cases, for it is the early cases which are the most difficult to reach and which we most wish to help—we can always reach the advanced cases for whom we can unfortunately do too little. The great movement already has an impetus which will effectually limit the spread of the infection. When we have reached the early cases and have shown them the road back to health there will be few advanced cases. It is the insane fear of tuberculosis which confronts us today and which most greatly hampers us in getting at the early cases among the poorer people. One of the men who first recognized the logical danger of our educa-

tional campaign was Dr. Victor C. Vaughan, who from the very beginning has raised his voice against the exaggerated fear of the masses. He has said "there is one thing worse than tuberculosis, and that is the insane fear of the disease." And that is the very thing I wish to emphasize today. Don't think for a moment that this insane fear we have developed by our methods is limited to the lower classes, because it is to be found in its most aggravated and cruel forms in the higher classes. Have I not seen time and time again people of education and of culture hold their handkerchiefs to their noses (and probably hold their breath besides) when passing an institution for tuberculosis? It has been a matter of frequent observation that people would cross over to the other side of the street before reaching the sanitarium and then cross back again to the same side after they had gotten by. I have seen doctors who would not treat a case of consumption. I remember one who stood off in the middle of the room without coming near the patient and would not sit down in a chair in the sick room. He acted very much as some of us have doubtless acted in the presence of our first smallpox patient. I have known of people who would not live in a house adjoining one occupied by a consumptive. Within the last year I received a telephone call from a lady in one of our fashionable hotels to go see her little child. A few minutes later, before I could answer the call, the 'phone rang again—it was the same lady. In the most anxious tone she said: "I have just learned that you treat consumptives; please don't come—I wouldn't have you see my baby for anything in the world." The proprietor of a certain hotel in Asheville entered a frantic protest against the establishing of a sanitarium a full half mile from his hostelry. The directors of a collegiate institution requested that a sanitarium be not built fully a quarter of a mile from their nearest building. In full justice to them it should be said, however, that they stated that they made the request not because they themselves believed it would be a menace to the health of their students, but because in the present state of public mind on the subject of tuberculosis they were sure that it would injure their prestige.

Were such ridiculous instances as these the only result of the insane fear of tuberculosis the subject would hardly be worthy our consideration more than to afford us amusement. But, alas! it has a much more serious side—a side not only momentous from an economic standpoint, but sad and cruel in the extreme.

It is hard to realize how far-reaching is this fear. In the Detroit telephone exchange

a young lady who was chief operator in one of the stations had a cough. The other girls went to the manager and threatened to leave in a body if this young woman, who was one of their most valuable employes, was not discharged. The manager sent her to Dr. Shurley for an examination. Fortunately, she had only a pharyngeal polyp, the removal of which instantly stopped all cough. Had she been tuberculous the young woman would have lost her means of a livelihood and the business and routine of a great public utility would have been seriously hampered. I could relate to you numerous instances where men have lost their positions because they had a cough and took the unselfish precaution to safeguard their associates by using sanitary spit cups.

The taking of proper precautions by tuberculous individuals is a signal for avoidance by their friends and associates. All this might be borne for the common good were it necessary. But it finds its saddest phase in the isolation of the sick by their families and by those to whom they are bound by the dearest ties of life. I could tell you of instances where brothers have avoided the presence of a sick sister; yes, of where a mother turned her tuberculous child over to the care of a trained attendant and only appeared in the sick room at long intervals, and then for a moment. She let that little life slip away day by day without giving the child a single caress. One day in the sick room I picked the poor little withered body up in my arms, and as I held her she looked up into my face with her great, big eyes, to which her illness had given even a greater brightness. In sweet little lisps she said: "Oh, Doiter, it has been ages and ages since mamma has held me in her arms and rocked me." Unnatural mother she was, but made so by an insane and selfish fear of tuberculosis. In the practice of a brother physician even greater cruelty was practiced by a sister to her brother.

A less common phase of this insane fear of tuberculosis is illustrated by a young man who came under my care some months ago. The poor fellow would not allow a member of his family to touch him; he would not eat at the same table with the family; he would not touch a doorknob with his bare hand, all for fear of infecting some one else.

Those with sensitive temperaments dreading being ostracized by their friends will hide the evidences of their disease. It is sometimes with the greatest difficulty that the consumptive can find a home.

How unnecessary all this is I need not tell the doctor in my audience today. We

have overreached ourselves indeed. Let us use every effort to bring the people to understand that tuberculosis is only a dangerously transmissible disease when a few very simple precautions are neglected—that tubercle bacilli are not sitting, like little devils, perched upon the persons of the tuberculous ready to spring down the throats of every individual who comes near him; that with every breath millions of germs are not belched forth like destroying fire from the nostrils of a snorting devil; that the air of a consumptive's room is not an atmosphere of living death. But, rather, let us impress upon them that when the consumptive has taken proper care of his sputum, and has exercised the ordinary decencies of right living, that he is a menace to no man; that when these precautions are taken one might live for years in well ventilated and lighted room with him without risk.

At this point, and before concluding, I want to pay my respects to antiseptics and disinfectants and say that the encouragement of their use by the laity has been productive, upon the whole, of much more harm than good. The smell of carbolic acid or the fumes of formaldehyde gives a feeling of false security which results in carelessness and indiscretions. A childlike faith in the germ-killing powers of disinfectants is responsible for more indecent habits than any other thing I know. A teaspoonful of carbolic acid in a pail of water sprinkled about a room is supposed to remove the dangers of infection with the same facility that marked the miracles of the early Christian Era, a piece of inert paraform blazoned with mystic insignia when burned in a room with cracks, open fire holes and grates to work with the magic of an Indian juggler. In fact, just as the misinterpretation of negative findings has led me to state that the microscope was one of our greatest barriers to the early diagnosis of tuberculosis, I firmly believe the misuse of disinfectants, despite their unquestioned utility, has been one of our most productive sources of extension of infection. Let it be known that the tubercle bacillus hates fresh air and sunlight more than the devil hates holy water. Just as antiseptic surgery has given way to aseptic surgery, so must disinfectants, to a great degree, be displaced by cleanliness in our fight against the spread of tuberculosis. Let us preach the gospel of cleanliness and decent habits of life and we will have not only limited the spread of tuberculosis, but will have opened up a new era of better manhood, both physically and morally.

The Instruction of School Children in North Carolina in the Hygiene of Tuberculosis and Other Infectious Diseases.

By Dr. L. B. McBrayer, Asheville, N. C.

In the dissemination of information as to the prevention of tuberculosis and other infectious diseases, the first point to be considered is ways and means. And this finally narrows itself down to the best way—the cheapest way—the most effective way—the quickest way of disseminating this information.

In answer to this query I wish to present the Public Schools of our State. Think for a moment of the vast number of children who attend our public schools every day. In my own city of Asheville we have a population of school age of 3,500 and every one of them in school on account of a compulsory school law. In your enterprising city of Charlotte you have a school population of 9,082 and no doubt every one of them in school because of the civic pride, the Charlotte spirit if you please, that exists in the heart and home of every citizen of your fair city. In the State of North Carolina we have a school population of 715,716 and a daily average attendance last year in the public schools of 308,488. Take into consideration the fact that many others attend part of the time and others still of school age are in colleges and private schools, and we are safe in saying that 400,000 children are in school in our State every day of the school year. Think what an audience this to talk to about the prevention of disease. And if this were carried out in every State we would have an audience of 16,500,000 every day of the school year, for this is the enrollment while the school population is 25,000,000.

It is all right to present this subject in public lectures by eminent men of our profession and I say keep it up, but from the attendance of the public on a lecture given by a prominent member of this Society I estimate it would require 4,000 men on the lecture platform to reach the same number of people that can be reached through our public schools in one day and every day. Can this Society furnish the men?

Then think how much importance attaches to this audience. Through this audience you are sending the good news, "glad tidings of great joy," into nearly every home in our State; and more, we can not forget that the children of to-day are the men and women of tomorrow, and that in ten to fifteen years from now the children in our public schools to-day will be the fathers and mothers in our State and will direct the affairs of our homes and of our commonwealth. The children as they

learn the good news of how to prevent these dread diseases will carry it into their homes and so we get an immediate as well as a remote effect.

Then of course the question arises, how shall we reach the vast army of children? And I reply through teachers and text books. What shall I say of the public school teachers of North Carolina? No eulogy that I could deliver would be too good for them. The men are heroes and the women are heroines. But this is not the time nor the place for an eulogy. Suffice it to say that they are faithful to the trust reposed in them. They are constantly laboring for the betterment of their profession and are certainly doing their full share in the general uplift of our citizenship. And they stand ever ready, and will continue to stand, to adopt any new departure or measure that will be for the good and for the betterment of the 725,000 school children of North Carolina. Provide them with the information and give them proper text books and they will be the strongest allies the medical profession can get in disseminating a knowledge of preventive medicine, in teaching Hygiene.

And now let me pay my respects to the text books on physiology and hygiene that are used in our public schools. In the first place the title is a misnomer. They are in reality text books on anatomy and physiology and should be so labeled. These subjects are pretty well covered, certainly for a child from eight to fifteen years of age, but to my mind these subjects are not *the* important thing. The important thing is *Hygiene* and that is scarcely touched upon at all. Outside of teaching the children to sit up straight in their chairs, which is done by oral lessons in the younger grades, and suggestions in a casual and general way that they should keep their rooms properly ventilated, should boil their water if a water borne disease were prevalent and one lone picture of tubercle bacilli without comment, there is absolutely nothing on the subject of Hygiene in a whole system of three books on Physiology and Hygiene used by one of our city schools. I must correct myself—there is enough said about alcohol and its deleterious and dangerous effects to satisfy the most rabid latter day prohibitionist in our State. These things are all right as far as they go, but they don't go far enough. Hygiene means "that department of medical science which treats of the preservation of health." Taking the converse of the proposition and using a latter day term we might with equal propriety define the word to mean "the prevention of disease." The latin word from which our word Hygiene is derived

means "the goddess of health." I am quite sure unless the children get a great deal of information other than that furnished in the text books used in our public schools they will not worship at the shrine of this goddess very devoutly or faithfully, if at all.

A text book on Hygiene should have a chapter on the methods of infection in typhoid fever and its prevention—likewise yellow fever, and don't forget to immortalize the three doctors, heroes that they were, who offered themselves up as a sacrifice to give us a knowledge of the cause of yellow fever and its prevention. Smallpox, scarlet fever, diphtheria, malaria, tuberculosis, hook worm disease, etc., etc., etc. A chapter should be devoted to the fly as a purveyor of filth and disease, his methods of life and propagation of his species, likewise the mosquito and how to eradicate them. And many other things along this line that will readily occur to any physician who takes time to give a thought to the subject.

Then if the text books on Physiology and Hygiene used in our public schools are not what they ought to be, do not contain what they ought to contain, whose fault is it and what is the remedy?

The publishers of our text books for our public schools are usually corporations. The question whether or not a corporation pays taxes or gets rebates may admit of argument; the question whether or not a corporation has a soul may admit of argument; the question whether or not a corporation may admit of argument, we leave this to the politicians, but the question whether or not a corporation knows anything about hygiene is not debatable, it does not. However the publisher is not wholly blameable by any manner of means, in fact they are ready to give the people anything they want and will pay for, whether it is one theology or infidelity. I call to witness the fact that when a clamor was made only a few years ago that books on hygiene for the public schools should teach and stress the deleterious effects of alcohol, the same appeared very promptly. And only last year, when our State School-book Commission was about to adopt books for our public schools for a period of five years, a request was made that they require the successful bidder on the books on Physiology and Hygiene to add a chapter on the prevention of tuberculosis, this request was not only complied with but complied with gladly. And the J. B. Lippincott Co. added a chapter of eleven pages to the second book of its series, that will probably be worth more to the State than all the balance of information they give on the

subject of Hygiene, and the same is being taught in our public schools to-day. So I say the publishers stand ready to give us anything we want.

Again the books used by our public schools are selected by our State School-book Commission or in our cities by our School Boards, which means for the most part by the Superintendent of our city schools, they are conscientious in their work, they do the best they know how, they get together books on the subject from several different publishers and select what seems to them to be the best for the money, but none of them have a Hygienic conscience or in other words none of them realize as we do the importance of this subject. At the last analysis then it is our fault. It is the fault of the doctors of North Carolina. It is the fault of our State Board of Health. (With all due respect and reverence for our splendid Board of Health.) It is the fault of this Society. Gentlemen of the North Carolina State Society for the Prevention of Tuberculosis, is there any excuse for your existence? Are you in earnest? If so take up this subject and see to it that our school books on Physiology and Hygiene are what they ought to be. Let this Society appoint a committee, a small committee, a working committee that knows an obstacle only to surmount it, a committee that can and will do things and let them be charged with carrying out the suggestions of this paper or the will of this Society in regard to our text books on Hygiene used in our public schools and what they contain and the teaching of the same. Let them interest the State Superintendent of Public Instruction in this work, and that is easy for State Superintendent Joyner is here now and thereby shows his interest already; let them see to it that this interest filters down through the County and City Superintendents, and the County and City Health Officers down through the teachers to the children. Let them see to it that each year the State Teachers Assembly has information along this line, that the meetings of the County and City teachers also are put wise. And let me suggest further that we set apart a certain day to be observed as "health day." We have Washington's birthday observed, we have North Carolina Day, Uncle Remus Day, etc. Then let us have "health day." Let it be properly observed by every teacher and class in every school throughout the State. And ere long, when these things shall have been accomplished, a knowledge of Hygiene will cover this State as the waters cover the sea. May God and this Society and the Doctors and the Teachers speed the day.

Tincture Veratrum Viride (Norwood).†

J. S. Todd, M. D., Atlanta, Ga., First Ass't Surgeon-General United Confederate Veterans;
Emeritus Prof. Therap. and Mat. Med. Atlanta College Phys. and Surg.; Ex-Pres't Georgia State and Atlanta Medical Societies, etc.

At the request of several prominent younger members of the medical profession, I write this short article on a drug that was in the South, when I began to practice medicine, one of the most generally used—in fact it was universally prescribed in all surgical fevers, stentile inflammations, pneumonias, especially. It also had its advocates, even in the continued fevers.

I was reared in medicine, sitting at the feet of A. W. Griggs—who was in his day as a medical philosopher, second to no one I ever knew. He denominated the Tincture of Veratrum as "the swiftest courser in all the field." The great Willis F. Westmoreland, said he did not know how he could practice surgery without it. Dr. H. V. M. Miller, the walking, eloquent, encyclopedia of universal information on all subjects, esteemed it as one of our sheet anchors. The learned, conservative, courtly Christian gentleman, Professor J. P. Logan, endorsed and praised it. Thus regarded by the leaders of that time, is it any wonder that "this younger brother of Tartar Emetic," grand son of Phlebotomy and father of the coal tar antipyretics, should have been the fashion for a season?

To illustrate how completely it has fallen into disfavor among book writers up North, where it was never popular or given correctly, I quote from Sollman, author of the latest and most up-to-date work on Pharmacology, etc. All that he has to say under the heading of Therapeutic application of this drug given internally is, "It has been used after the manner of Aconite to secure the reduction of temperature by artificial *collapse*. It has no advantages."

Shades of the mighty dead, I would be ashamed to meet you in the Elysian fields, did I hold my peace!

What I write is confined exclusively to the Tincture Veratrum Viride as prepared by the Shakers at Mount Lebanon, N. Y., according to the formula given by Dr. Norwood of Cokesbury, S. C. I never used any other preparation, nor did any of the Southern doctors, at any time.

The usual dose given by us was M ISS, or (III ordinary drops), generally at three hour intervals. Please bear the dose in mind, as the doses directed in all the modern *Materia Medica* are from 5 M (10 drops) to 30 M (60 drops). Given in such inor-

†Read before the recent meeting of the Southern Medical Association, Atlanta, Ga.

dinate quantities, I can very well comprehend why it should be regarded with disfavor, even alarm, for it has to be watched, lest it cause too much depression if given only in the dose I have indicated above. This can be obviated, however, by administering 1-20 gr. morphine, 3 M of Laudanum or one-half a drachm of paregoric with each dose of the Veratrum. All the modern therapeutic books give a long list of antidotes to its poisonous actions. But one is needed: a hypodermic of morphine restores almost as quickly as an alkali neutralizes an acid. This I know by numerous personal experiences.

That the drug in question cuts short a pneumonia, typhoid fever, or any other disease, except probably puerperal convulsions, I do not affirm or believe, but against its being relegated to a barbaric past I protest, for it has uses still, despite its abuses in times gone by. Veratrum Viride is not only a cardiac depressant, but a vassor dilator. Given in the quantity I have stated it rarely—never if the opium be added—produces nausea, vomiting, diarrhoea, profuse sweating, giddiness, or symptoms of collapse. The pulse can be kept at about 70 to 80 and be soft, and the temperature reduced to near normal. Under the teaching of the great Leibermaster that heat was fever, was it strange that the older doctors thought they had in it a cure for many diseases?

There is but one affection under my observation where doses of as much as 5 M (10 drops) should be given, and that is in puerperal convulsions, and this quantity hypodermatically at that, and repeated if need be hourly. To its curative effect in this trouble there are clouds of medical observers. To show that I am not a partisan, I will state that even in this disease, I believe that apomorphia is the better medication and the one I have depended on in the large majority of cases of this nature. With the advent of Tart. Emetic and Veratrum, phlebotomy became less and less resorted to, and the phenacetin group of antipyretics have superceded Veratrum, to be displaced in turn by hydrotherapy. The evolution has, I am sure, been salutary in the main, but none of the agents above cited are useless, they still have a place in therapeutics and we must hold fast to that which is good.

Veratrum is a valuable antidote in the treatment of opium poisoning, which, so far as I am aware, I was the first to point out in an article in the January number, 1874, of American Journal of the Medical Sciences. "Notes on Case of Opium Poisoning."

My principal employment of Veratrum

now, is in the treatment of certain heart diseases and all troubles where there is increased blood pressure, artero sclerosis, or calcareous degeneration of the arteries, but I seldom employ it alone, but generally as an antagonist to other drugs as necessary.

We but rarely gave atropine alone but with morphine so generally that we might almost say that we now seldom give morphine alone, because the antagonism between the two when given together, is so salutary.

In aortic insufficiency or regurgitation, while digitalis is not *always* contra-indicated it is generally bad practice to administer it or strychnine because they contract the capillaries and thereby increase the blood accumulation in left ventricle, to say nothing of the lengthening of the diastole; yet we would often like to give them; so in hypertrophy, where dilatation or fatty degeneration are beginning, or tumultuous palpitation is a symptom. In chronic Bright's disease, where, despite diet and all other treatment, the general symptomatic call for digitalis is so urgent, as expressed by cough—blood tinged; dyspnoea, scanty urination, anasarca, weak, rapid, irregular, but *hard* pulse, we are often surprised to find that each dose of digitalis increases the general distress, for the spasm in the peripheral circulation is intensified.

Why, I can almost hear dozens of you younger men say, do you not give or combine with the digitalis, squill or strychnine, nitro-glycerine, nitrate of soda, tincture glonoin, or have patient to inhale nitrite of amyl. Well, I have tried them all and acknowledge that the object aimed at, namely, the abolition of spasm in the arterioles, etc., is correct, and often accomplished, but not unfailingly so, unless we give nitrite of amyl. Why? Over 30% of the nitro-glycerine that we use in the form of tablets is inert, has decomposed; so of the tincture glonoin, or trinitrin, as it is often called; the soda preparation being decomposed in the stomach is apt to cause derangement of the digestion, and therefore has no advantages of Veratrum in this regard.

Recent experiments, too, teach that the dilatation or the arterioles, where nitro-glycerine is given, is over in less than five minutes, and subsides, when nitrite of amyl is inhaled, in half that period. I am not sure as to the exact time, but am positive that I have stated the maximum number of minutes or more. So, it is obvious that we lean on a broken reed when we employ them, even granting that they are pure, except to tide over emergencies. Not so with Tincture Veratrum, for its maximum

effects are not apparent until at least two and a half hours have elapsed. This gives the explanation of the doses being given by the older doctors at three hour intervals. The effects last for six to twelve hours, thereby corresponding very nearly to digitalis, squill and strychnine. The beneficial effects we would get from it, when administered with digitalis, strychnine, strophanthus, etc., in arterio-sclerosis, dilatation of, or fatty degeneration of the heart are so obvious as to need no comment. I usually make the following prescription to meet the conditions spoken of and have every and repeated clinical proof to be amply satisfied with it.

Tinct. Verat. Viridi (Norwood) m xlv.

Pul. Digitalis,

Pul. Scillae aa $\frac{1}{2}$ drach.

Strych. Nitrate, Gr. ss.

Pul. Zinziberis, 1 drach. m. ft. cap. xxx

S. One every 4, 6, 8 or 12 hours, as needed.

Calomel or blue mass, Pil. aloes et myrrh,

may be added as occasion requires.

Excuse me for adding that in writing prescriptions where the M sign is used, you should always underscore it, for the majority of pharmacists will give you drops,—dropped from, I know not what. To be sure that I get what I want, I nearly always, not only underscore the M but also put a cross by it, thus: “x M”, which refers to a note at bottom of prescription where is written “x M, not drops.”

In the compounding of drugs, or writing a prescription, as in all things else, “while perfection is no trifle, trifles make perfection.”

The Diagnosis and Treatment of Tuberculosis of the Testicle.†

By W. Lowndes Peple, M. D., Richmond, Va. Professor of Histology, Assistant to the Chair of Clinical Surgery, University College of Medicine.

Tuberculosis of the testicle, as seen by the clinician, presents one of several pictures:

1. The most favorable is one with a small nodular mass in the head of the epididymis that has been discovered by accident. It is painless, free from tenderness and gives rise to no constitutional symptoms.

2. More commonly, the case presents a larger mass involving the head and body and part of the testicle proper. It is accompanied by a sero purulent discharge from the urethra. There may be areas of softening in the mass, with open ulcers upon the scrotum and scars of others that have healed. The skin is adherent over the mass and is greatly thickened and infiltrated.

The cord is also often involved, and may present a roll as large as the little finger. Constitutional symptoms are well marked.

3. A far rarer condition, described by some writer as “galloping consumption” of the testicle, is occasionally met with. The constitutional symptoms here resemble in violence those of acute gonorrheal epididymitis, and might mislead one by their very intensity.

The three clinical pictures presented are not to be regarded as simply three stages that might be seen at three different periods in any given case, for the first is usually of far longer duration than the other two. We must regard them as the measures or grades of resistance to tubercular infection presented by the three individuals. This fact should be ever present when estimating the chances of recovery under any procedure and in calculating the risk of dissemination in radical operations.

The progress that has been made in the early detection of tuberculous lesions of the lungs and other organs, and the results achieved in consequence, should stimulate us to earlier recognition of tuberculous infection of the testicle with a hope of corresponding improvement in our results in this condition.

Any case presenting a nodular mass in the epididymis, regardless of the absence of local or general symptoms, should fall under suspicion. Epididymitis of known gonorrheal origin, in which the hardened area is slow in disappearing, should be kept under careful observation.

Mumps of the testicle will bear watching from time to time, as two of my cases will suggest. An epididymitis occurring in a tuberculous patient should always be investigated even if a gonorrhea has existed or is still present. Of 107 autopsies on tuberculosis patients done at Phipps Institute, Philadelphia, 3 showed tuberculosis of the testicle. As to the frequency of this condition, R. J. Howard, in the British Journal of Children's Disease, reports 158 cases out of the 55,912 patients admitted to the London Hospital in a period of ten years. Nine of these were under 12 years of age; and cases are recorded at 2 years, 6 weeks, and even in the fetus. The usual age is between 18 and 30 years.

The diagnosis of a case with open ulcers upon the attached and infiltrated scrotum, or with a purulent urethral discharge, may be simply a question of cover-slip preparation and one brief peep at the field. But such a case should have a more careful and painstaking examination, if possible, than that with only the small, indurated nodule. Investigation should not stop on simply making a positive diagnosis, but should be

† Read before the Richmond Academy of Medicine and Surgery, October 13, 1908.

continued until every tuberculous lesion in the body that can be revealed, lies uncovered.

If the lungs, the kidneys, the bladder or the prostate are involved, operation might be contraindicated. That tuberculosis often occurs primarily in the testicle, is conceded by all authorities, and this should prove a strong incentive to early diagnosis with a view to early treatment before secondary foci are established.

Tuberculosis of the prostate and seminal vesicles is a frequent clinicole accompaniment either as a primary focus or as a secondary localization. No case should be subjected to operative treatment without thorough digital examination of the prostate and vesicles and ocular inspection of the deep urethra.

Any urethral discharge or strippings from the vesicles should be examined for the tubercle bacillus, due care being taken in the collection, to prevent contamination with smegma, which might lead to a dangerous error. The diseases with which it is likely to be confounded, in the absence of microscopic confirmation, are syphilis, malignant disease and epididymitis from other infections.

The syphilitic gumma is rounder, presents no nodules, no sharp, hard edges. It usually begins in the body of the testicle. The absence of a syphilitic history or specific lesions elsewhere, coupled with a short therapeutic test, if needed, should easily eliminate this condition.

Malignant tumors will seldom present a history so long in duration as tuberculosis. Other parts of the testicle than the epididymis are affected and the constitutional symptoms are lacking.

To make a differential diagnosis in a case of gonorrheal epididymitis in which the inflammatory infiltration has been unduly long in resolution, may prove a difficult matter from the history and microscopic findings. The tuberculin test in such cases, or in any of the foregoing, in the hands of one accustomed to work with bacterial products, will prove a positive and final method of diagnosis. To obtain the general reaction of fever, malais, etc., is not sufficient, for this might only indicate an active tubercular process elsewhere in the body, or that one had existed years previously. When properly administered in small dosage, positive local reaction, pain, tenderness or redness, in the case of the testicle, can be obtained. This precedes the general reaction, for it is by provoking the local inflammation at the seat of the lesion that constitutional symptoms are made to appear. In cases that are doubtful, the local

reaction from tuberculin should make conclusive the diagnosis.

Treatment.—That spontaneous healing of the tuberculous testicle is possible, can not be denied; but to hope for such a termination even with climatic, dietetic and hygienic treatment, would hardly be considered justifiable treatment by the most earnest advocates of the out-of-door methods.

Injections.—Solutions of iodine and other antiseptics, and emulsions of iodoform have been tried in this condition by different operators, with varying degrees of success. They have failed to impress the profession with any marked advantage over other methods. An Italian recently reported 12 cases in which the patients were restored to health and good spirits by injections of 1% solution of iodine in water with iodide of potash, beginning with a few drops and gradually increasing the dose, which he diffused widely through the infected tissues. Thirty doses were sufficient for a case.

The X-Ray.—James Bullitt, of Louisville, reported 36 cases treated with the x-ray, of which 7 were cured, 10 improved and 19 unimproved. The limited depth of the disease from the surface would seem to make it an ideal treatment in this location, but when the by-effect of the ray is fully appreciated by the laity, it will not be apt to grow rapidly in popular favor.

Treatment with bacterial products.—C. T. Western, in the *Lancet*, Nov. 23, 1907, states that the use of tuberculin has, in his hands, proven almost universally satisfactory in these cases. It is too early yet to state definitely what can be done with these products, but I believe that through them is to be evolved the treatment of the future, and that this will be combined with surgery, preceding it, to raise the resistance of the patient, and following it to prevent dissemination.

Surgical Treatment.—The conservative operation of resecting parts of the epididymis are seldom indicated, as they are applicable only to cases of very limited involvement. If done on the more advanced cases, function is not only lost, but there is far more danger of local recurrence than when the entire organ is removed.

When the visceral and parietal layers of the tunica vaginalis are adherent and soft, caseating or suppurating spots can be felt it is the part of wisdom to open, curette and pack these cavities as we would treat similar tuberculous lesions elsewhere. This is but assisting nature who has expressed her willingness to help, in terms of localization.

Radical Operations.—Castration is indicated when there is reasonable hope of com-

plete removal of the disease, or to remove a suppurating mass from which absorption is going on to such an extent as make its continuance a danger. The complete removal of the testicle, its cord, the seminal vesicle and the infected prostate by combined inguinal and perineal incisions is one that does not appeal to me, though Dr. Jos. A. Blake reports a case in which at three successive operations, the left kidney, ureter, the left testicle, both seminal vesicles and most of the prostate were removed for tuberculosis, and three years later the patient is apparently well. I have rather regarded prostatic and vesicular involvement as a contraindication to operation, for it seems almost certain that the remaining testicle will also become involved.

The most favorable class of cases is that in which there is much fibrous tissue raised as a barrier around the focus of infection, and, in consequence, little or no constitutional disturbance. In other words, the patient with the greatest natural resistance is the most favorable for treatment. If it be possible by means of the bacterial products, to increase the resistance of the less favorable case until it presents the clinical aspects of the most favorable, even if we cannot pursue the treatment to its logical conclusion, and effect a cure, we will have gone very far and accomplished much.

The question of procedure in cases with both testes involved, or when removal of one is followed by infection of the remaining organ, is one for mature deliberation. Many operators advise positively against the double or second operation. As to the results of operative treatment, I quote from Ludwig Berger who reports 77 cases gleaned from the literature of the last twenty-five years. Of 35 unilateral castrations, 20 are now living and 10 have died; 9 bilateral castrations, 6 are well, 3 have died; 3 partial resections all well.

Without going into a detailed description of castration, I would call attention to several practical suggestions in technique. It is well to go high up the cord, even to the internal ring. The tunica vaginalis should always be removed with the testicle. The tunic vaginalis should not be opened prior to removal from the scrotum, especially if it contains much fluid, for this may be infectious. If the testicle and its tunic are together peeled from the scrotum as in the bottle operation for hydrocele, there will be not only less bleeding and trauma, but it can be much more quickly accomplished. This will also permit the opening of the tunica vaginalis outside the scrotum without fear of contamination if it is thought wise to inspect the testicle with a view to

possible conservatism or to make certain the diagnosis. When the testicle is honey-combed with abscesses, or is a soft, boggy mass, it is best to go first to the internal ring, to isolate the cord, cut it between ligatures and strip it out from above downward. This will minimize the possibility of dissemination from rough handling which might force the infection into the open veins and lymphatics, if we work from below upward with the cord intact.

Before reporting the several cases which I have selected to illustrate the different phases of these diseases, I would earnestly urge that in all operations upon the testicle for suspected tuberculosis, whether radical or conservative, the specimen be submitted to a competent pathologist for a full report. This will not only finish the case for literature and make subsequent reports as to the progress of the case of real value, but it will teach us to think in new lines. The evidence of resistance, or lack of it, expressed in tissue changes, will be seen to keep such accurate tally with the constitutional symptoms that seeing the specimen or the patient alone will give one a fairly accurate idea of what the other will be.

Case I.—A strong, robust man of 27, of healthy parentage, gives negative family history. Has one child 2 years old (twins were born two months after his operation), and had mumps 10 years ago, which affected the right testicle; has had repeated attacks of gonorrhea, and orchitis of the right side. For five years, has noticed a small, growing lump in the epididymis of the right testicle which gave no pain or discomfort until two months ago. His occupation of traveling salesman keeps him on his feet most of the time. His suspensory which at first kept him entirely comfortable, now gives no relief and the tumor is growing rapidly. *Examination* shows no urethral discharge, no prostatic or seminal vesicle involvement, no constitutional symptoms, no loss of weight. A hard, nodular mass, the size of a hen's egg, back of the testicle; the testicle itself seems small. *Diagnosis*, tubercular epididymitis.

Operation.—High castration with complete excision of the tunica vaginalis, done January, 1907.

Gross appearance of the specimen. A large, hard, nodular mass in the region of the epididymis; section shows normal structure replaced by scar tissue; body of testicle normal in appearance. *Microscopic examination* by E. Guy Hopkins: Typical tubercular structure, but well walled off by a thick, protecting bulwark of fibrous tissue.

I examined the patient October 11, 1908, 1 year and 9 months from operation, and found no evidence of return locally, or of

involvement of the other side. He is in excellent physical condition.

The macroscopic and microscopic findings in the specimen harmonize faithfully with the clinical history of slow growth without constitutional symptoms in this robust, vigorous individual.

Case II.—Young man of 24; occupation, clerical work. Family history: No tuberculosis. Never had gonorrhea or syphilis. Two years ago, during an epidemic, was taken with mumps which also affected one of his testicles, putting him in bed for some days. The testicle never became normal, but was hard and swollen and gave pain unless supported. *Present condition:* A tall, thin, anemic fellow, looking like a consumptive; considerably underweight; suffering from malaise; has no night sweats; temperature, $100\frac{1}{2}$; no cough, nor evidence of lung involvement.

Physical examination.—A hard, rigid tumor involving the epididymis and the testicle proper, the whole being twice the natural size. It is not nodular, nor very tender to the touch. There is no urethral discharge; the prostate and vesicles are not involved; the urine contains no pus. There is no stricture, but a little blood on passing a full sized sound. *Diagnosis:* Tuberculosis of the testicle. *Operation,* October 22, 1907. Castration by high incision up to the internal ring; removal of tunica vaginalis; closed without drainage. Primary union. Patient left hospital on 10th day with normal temperature. Physical examination, by J. G. Nelson, showed no involvement of the lungs.

Gross appearance of specimen: Epididymis and gland tissue destroyed, the whole appearing as a necrotic mass. *Microscopic examination,* by Dr. E. C. Hopkins: Large areas of confluent, multiple tubercles, the centres showing cheesy degeneration; the edges showing typical epithelioid cells and a few giant cells; excessive round-cell infiltration; very little new fibrous tissue.

Subsequent History.—Patient returned from the country greatly improved in appearance, having gained 15 lbs. in weight. He returned in March, 1908, with involvement of the epididymis of the opposite side. I advised against operation as did my consultant, although the patient was anxious for its removal.

He applied again in April, this time with high temperature, rapid pulse and marked emaciation, with the local condition still worse. He insisted on operation as the organ was functionally useless; but with a picture of the specimen in my mind, evincing so little evidence of protective effort on the part of his tissues, and this also in accordance with his constitutional symptoms, I

did not believe the operation justifiable. He was put to bed and I called in Dr. W. H. Coffman, who, after thorough examination, now discovered slight involvement of the apices of both lungs. Treatment with the watery extract of tubercle bacilli was begun. Rest in bed soon lowered the temperature and bettered the general condition; and he was sent to his home in the country, where the treatment is still continued.

In July, he wrote that while his general condition is much improved, the local condition is apparently no better. In a letter of September 30th, he answers a series of questions as follows: Temperature has not been over 100 deg.; normal for three or four weeks until extreme hot weather came on, it is now normal again or nearly so. No cough or evidence of lung involvement. Appetite and digestion good; is much stronger. No evidence of return in scar; no enlargement of stump of cord nor the inguinal lymph nodes. Testicle somewhat smaller and remains hard; no softening; area seems smoother and is tender in places. Functionally, some improvement, as evidenced by erections. Suppuration of a small supra-clavicular node slow in healing.

This case is the direct antithesis of the one just reported. His first operation was justified in order to remove the necrotic mass from which absorption was taking place with such depressing results. If the present treatment does not effect a cure, I am in hopes that it may so increase his resistance that a second conservative or radical operation will not be followed by an outbreak elsewhere.

Case III, was untreated; and I report it briefly from memory as it illustrates either a rekindling of a long latent tubercular infection, or shows the rapid ravages of the disease in one peculiarly susceptible.

A man of 30, practising physician, had hip joint disease at an early age; recovered with some deformity, but a good leg. Practiced in the country and lived an outdoor life. He came to Dr. McGuire at St. Luke's Hospital, with all the typical symptoms of tubercular epididymitis, including the urethral discharge with numerous bacilli. His prostate was much involved. He declined operation, which was suggested but not urged. A few months later developed cystitis and then pyelitis, and returned to the hospital in bad shape with high fever and evidence of virulent infection. A week later, he developed meningitis from which he soon died.

9000 West Grace Street.

Some Considerations as to the Nature and Treatment of Functional Neurasthenia.†

By E. M. Hummel, M.D., Visiting Neurologist
Charity Hospital; Consulting Neurologist, City
House of Detention; Assistant to Chair on
Nervous and Mental Diseases, Tulane
University, New Orleans, La.

Leaving out of consideration those neurasthenic states incidental to grave or chronic illness, cachexia, excesses, or some physical episode, I will endeavor to make some observations on functional neurasthenia, which is most prevalent and important—being one of the three major neuroses which, I might say, almost characterize the race.

Beard immortalized himself by raising this ensemble of symptoms to the dignity of a disease entity and coining a name for it. However, no one may doubt that as a nervous syndrome it is as old as the race; nor is it probable that it is especially prevalent in this country and in modern times. Man has always had his alcoholic and narcotic to resort to, and I believe the very prevalent use of these things is a response to a neurasthenic craving for escape from the morbid ennui and sense of fatigue incident to this neurosis. And the same may be said of stimulating popular drinks of every kind. Not that I wish to be understood as asserting that all who partake of such substances are neurasthenic, but the inference is clear that those who take most readily to alcohol and narcotics are primarily neurasthenic and most apt to become habitues, for the good reason that these substances subdue the oversensitiveness of their natures and stimulate them to a fuller sense of their energies. Likewise we have always had hoboes and drones—pronounced neurasthenics—who have surrendered to the tired feeling. A great deal of speculation has been indulged in attempts to explain the manifestations of this neurosis in terms of disordered physiology and many guesses have been hazarded as to what chemical changes of the intra-cellular nerve substances are responsible for them. Many ingenious theories have been advanced, but most of them have proven disappointing.

It will be conceded that the symptom display is quite the same apparently as that following real fatigue or exhaustion, in which marked chemical reduction, or destruction of, the cell plasma has been induced by overexertion or disease. Functional neurasthenia, however, is exhibited as a primary and essential neurosis, the

physical state being most often good and no condition of the general health obtaining to justify the assumption that any morbid alteration of the cell substance is present.

The condition appears to be a disturbance of nervous poise, and in some measure a mental state.

A deep and abiding conviction of fatigue and inadequacy has settled upon the subject. "As a man thinketh, so he is," at least as far as his subjective feelings go; and if some one will kindly find something in the complaints of a functional neurasthenic that is not subjective, the rest of us will feel obliged.

So that a conviction as to one's bodily health, whether introduced into consciousness through suggestion, auto-suggestion, or arising from the viscera and tissues as an organic sensation, is a mental conviction after all, and the consequence is quite the same.

This type of neurosis constitutes a large percentage of those ailing in a neurasthenic way, and is often difficult to disassociate from hypochondria, with which it is frequently associated.

Possibly the involved nervous system functions in some anomalous way in which neural energy is either not sufficiently conserved, or is unduly dissipated; or else from a perversion of trophism, central nervous function is carried on under low pressure.

One class is made up of those primarily neurotic people who seem to be oversensitive to everything in their lives. Persons so constituted are disposed to feel more over their experiences than a phlegmatic one. In consequence they carry in their temperaments the larger part of the picture of neurasthenia—sensory irritability and vague pains; and they almost inevitably acquire the motor phase—exhaustion. All activity is based upon sensation, and excessive appreciation of stimuli means excessive response thereto.

Many people signally fail to adjust themselves to their environment. In their early training they have had set for them a lot of impossible ideals. Their attainments are of course short of these, and they find the practical affairs of life different from what they had expected. The result is dissatisfaction, failure, fretting, self-depreciation. Nothing seems easier than to fire the ambition of a neurotic child to excel, when it is not equipped for excellence. Women break down under the strain of distasteful household duties which they never wished or expected to undertake, having in their girlhood probably been educated for or taught to aspire to a "career."

Very few men select a calling suited to

†Read before the recent meeting of the Southern Medical Society at Atlanta, Ga.

their natural aptitudes. The young man who enters a profession contrary to his native inclinations has ever to force himself to his work, and will be either a pronounced failure, a badly contented man or a neurasthenic, or all three.

In the complex circumstances incident to civilized modes of life it seems difficult for any one to find or follow his native aptitudes. Much in even well regulated lives is forced and affected; many a perfectly natural impulse must be restrained to conform to the necessary usages of community life, and even a simple life may lead us into many conflicts with our physiology.

Straight-away work at a congenial occupation, although excessive, is responsible for little or no nervous consequences. It is the friction and worry that damages and exhausts.

Disorders of the sexual function have always figured conspicuously in this form of neurasthenia; so much so that a sexual type is recognized. Sexual life is intimately a sensory affair, and it is to be expected that perversions in this sphere will involve the sexual attributes. In most instances, neither local conditions in the reproductive apparatus nor previous abuse of this function should be mistakenly assigned as causes. The fault is in the central nervous mechanism controlling these organs. Cure of the nervous state always cures the sexual anomaly, and the reproductive organs need not be tampered with.

It is obvious from the trend of opinion among neurologists everywhere that this neurosis is beginning to be regarded as most essentially a faulty mental attitude; a condition of inferior psychic tonus, probably with perverted trophism as an incident, but seldom a cause. Loss of weight and changes in the somatic state may result and be mistakenly assigned as a cause. And this brings us to practical indications in treatment.

The first requisite, nearly always, is a complete change of surroundings. The plan should be to place the patient where the air, food, personal contact and other daily regime will be as totally different from the accustomed as possible. The timid neurasthenic with phobias as to his ability to control himself if under the observation of others, and who has withdrawn into his home, should be sent where there is life and activity and encouraged or compelled to mingle with the crowd; while the business man who has succumbed to the humdrum and bustle of town life should be sent in the country to the quietest place accessible.

In the foregoing remarks it has rather been insisted that most neurasthenics are temperamentally too impressionable or over-

sensitive, as a result of which they are always overwrought. It is a great mistake to send this class of people to high and dry climates where there is too much sunshine (in the case of blondes) or sudden changes in the temperature. They invariably get worse with such a change. Quite the contrary conditions are demanded, and I know of no better place for this kind of case—especially in winter—than our Mississippi Gulf coast; where the temperature is even, the barometric pressure moderately high, sea breezes warm and laden with salt vapor, and every climatic condition such as to soothe and relax an over-wrought nervous system.

Plenty of nourishing food, different from that to which the patient is accustomed, is a requisite.

Psychic treatment gives results only when combined with rest treatment, which usually necessitates removal to a sanitarium and isolation from relatives, but not necessarily confinement to bed. The original rest treatment of Weir Mitchell has been much modified, and with benefit. Mental rest does not mean idleness. In fact there is no such thing as absolute mental idleness.

Nothing seems more deforming to mental activity than monotony. Those who have become neurasthenic from slaving and adherence to routine should be given totally different things to do and think about.

Such as are accustomed to lead idle or aimless lives should, if possible, be put to work. It seems to me some people actually become complaining because they have no interest in anything strong enough to incite them to activity in any direction.

Those who have gotten hardened to amusements and refuse to become interested in what is more or less familiar to them may be sent abroad or to some place where everything is novel and likely to compel their attention.

Satiation in the various pleasures leads to disgust, and those who pursue these phantoms so far lead languid, lax lives, and never know the pleasure and enhanced mental tonus that comes of contesting and overcoming obstacles.

People who have made themselves nervous by long established habits of worry should be taught to relax and drift, with indifference to consequences.

Any one who sticks to an uncongenial calling when he can make a living some other way is doing himself an injustice, and should be advised to change.

Those who live in morbid fear about their health should be reassured. We should seek to displace such obsessions by absorbing the attention in some direction.

Sometimes indications for certain reconstructive drugs are found, but this is exceptional. The promiscuous prescribing of medicine is a concession to the patient's preconceived notions of what the doctor should do for him.

The only rational treatment of functional neurasthenia consists in dislodging the patient from the rut of extraneous influences which have played upon him in a deleterious way to disturb his mental and nervous poise.

Typhoid Bacillus Carriers.†

By St. Geo. T. Grinnan, M.D., Richmond, Va.

It is only in recent years that we have begun to appreciate the fact that a typhoid patient may be a source of danger for years after recovery from the disease.

Many times when we have been unable to trace the source of infection to milk or water or to unhygienic conditions about the premises, some person, maybe the physician himself, is quietly spreading the disease. Persons in apparently good health are often a source of danger.

The epidemic of cholera now in St. Petersburg, Russia, reminds us that the cholera vibrio is carried in the intestinal tract of a healthy person, and were it not for the fact that the diphtheria bacillus is carried in the throat of healthy people, diphtheria would not be so common.

It is now well established that a similar relation exists in the case of man and the typhoid bacillus.

In 1899, Richardson¹ reported a case in which a man returned to Johns Hopkin's Hospital five years after an attack of typhoid fever. He was found to have typhoid cystitis and a pure culture of typhoid bacilli was taken from his urine.

In the feces the typhoid bacilli may persist even longer than in the urine and thus be a source of danger for many years.

Kayser,² in 1906, reported a most interesting case: "A woman about forty years of age had an attack of typhoid fever when she was ten years old, subsequent to which she suffered from jaundice. Five years previous to coming under observation she had been suffering from attacks of gallstone colic. Fecal examinations November 24, 1904, and repeatedly since (thirty years after the attack of typhoid) showed the persistent presence of typhoid bacilli. Her blood test, January, 1905, gave a positive widal. In 1904 two cases of typhoid occurred in her family in which no other source of infection could be found. Two

other cases occurred in neighbors with whom she had business dealings."

G. Dean³ reported one case in which typhoid bacilli were formed in a man's feces 29 years after an attack of typhoid fever.

Lentz⁴ reported one case in which typhoid bacilli were found in the feces 42 years after an attack of typhoid fever.

Momose⁵ reported an epidemic of typhoid on a Japanese man-of-war in which two healthy men served as carriers. The epidemic was arrested by isolation of the two carriers and the use of preventative serum for the rest of the crew.

A. Ledingham⁶ and J. C. G. Ledingham report a succession of outbreaks in a Scottish lunatic asylum. Out of 90 females examined three typhoid carriers were found.

Grimme⁷ reports a similar case in an insane asylum in Germany.

The assembling together of a large body of men, as in the Spanish-American War, is a signal for typhoid outbreaks, and recent work points to the chronic carriers as the most important cause of such epidemics.

Dr. L. A. La Garde,⁸ U. S. A., reports an epidemic traced to contact infected by chronic carriers.

O. Busse⁹ has called attention to the fact that typhoid bacilli are found in the blood of healthy people who have never had typhoid fever.

Drigalski and Conradi¹⁰ isolated typhoid bacilli from the blood of four persons who showed no symptoms of any kind, but had been in close contact with typhoid cases.

Contact infection brings up the question of the longevity of typhoid bacilli outside of the human body. Much evidence has been produced to show that the typhoid bacillus can live for weeks and months outside of the human body. In this connection Parkes¹¹ cites a most interesting case which shows that typhoid bacilli may remain virulent on blankets for six months. Some blankets which were last used in South Africa were sold without having been cleaned. A number of this lot found their way to the training ship Cornwall in the Thames. An outbreak of typhoid occurred on the ship. Some of the blankets from the lot received were examined bacteriologically and typhoid bacilli were found to be present.

Typhoid bacilli have been found to live on linen¹² many months, and dried on thread the bacilli have kept alive nearly one year.

In England a yoman¹³ having had typhoid fever returned from South Africa. He infected a well causing twelve cases.

The following case came under my observation recently: Three cases of typhoid fever appeared in one family at the same

†Read before the Medical Society of Virginia, Richmond, Virginia, Oct. 20-23, 1905.

time. The home was a model of cleanliness and none of them had ever had typhoid fever. A careful search as to the cause seemed for a time to show no reason for the sudden outbreak. The health department took up the inquiry and investigation showed that the family had recently employed a servant who had had typhoid fever two years ago. This servant had left one family where she had caused one case of typhoid before infecting the second family. The two families were several miles apart and no one, without investigating, would have suspected that the source of infection of the two families was the same. Of the four cases caused by this carrier one died. She cost one family over \$600.00. The question is, What shall be done with this woman? Is she not as dangerous as a small-pox patient free in the country?

The well known case of Dr. S. H. Park¹⁴ is worth repeating. "A cook was brought to the Research Laboratory, New York City, to have the feces and urine examined. In the past eight years she had been employed by eight families. In seven of these families typhoid fever broke out. In all, twenty-six cases occurred and there was one death. Being a menace to life the cook was detained by the department of health and she has now been detained for more than eighteen months. Treatment has been of no avail. The feces still contains typhoid bacilli in large numbers though she has taken as much as 150 grains of hexamethylenamin daily. The woman denies that she has ever had typhoid fever.

Contact infection is certainly one of the very important means of conveying typhoid.

The frequency with which trained nurses become infected constantly bears evidence of this.

A physician should carry antiseptic tablets and wash his hands in antiseptic solution after examining any case of fever which he suspects to be typhoid. If he does not take this precaution he may become infected or he may become a chronic typhoid bacillus carrier.

References:

1. Richardson, Jour. Exper. Med. 1899, Vol. 1.
2. Kayser, Hygienic Laboratory, Bulletin No. 35, p. 168.
3. Dean, British Medical Journal, March 7, 1908.
4. Lentz, Klein Jahrb., 1905, Vol. 15, p. 475.
5. Momose, Sei i-kwai Medical Journal, Tokyo, Dec. 12, 1907.
6. Ledingham, British Medical Journal, London, Jan. 4, 1908.
7. Grimme, Munchener Med. Woch., Jan. 7, 1908.

8. La Garde, Military Surgeon, Carlisle, May, 1908.

9. O. Busse, Munchener Med. Woch., May 26, 1908.

10. Hygienic Laboratory, Bulletin No. 35, p. 169.

11. Parkes, Practitioner, London, LXXI, 1903, p. 297.

12. Stimson, Hygienic Laboratory Bulletin, No. 35, p. 187.

13. Walker, Brit. Med. Journal, 1900, Vol. 2, p. 1494.

14. Park, Jour. American Medical Assn., March 7, 1908, p. 981.

Surgery of the Biliary Passages.†

By Murat Willis, M. D., Adjunct Professor of Abdominal Surgery, Medical College of Virginia; Junior Surgeon to Memorial Hospital, Richmond, Va.

The biliary apparatus consists, surgically speaking, of the gall-bladder, hepatic, cystic and common ducts. In a paper of this scope it would be impossible to deal with all of the surgical conditions of these structures, and for that reason I will confine myself to the most important lesion found in this region, cholecystitis and its sequelae.

The gall-bladder, by reason of its relationship with vital organs in the upper abdomen, and by reason of its great liability to infection and the extension of this infection to its accessory organs and the general peritoneal cavity, calls for our special consideration. In the words of Dr. Richardson, gall-bladder surgery demands—if any surgery in the abdomen demands—special knowledge and experience, knowledge of the highest and experience of the broadest. Like its neighbor, the appendix, it would seem that in health this organ is unimportant and practically useless, yet these two structures contribute a great percentage of the surgical diseases of the abdomen.

Cholecystitis may be calculous or non-calculous. An appreciation of the anatomy of the healthy organ and the pathological changes due to an infection readily explains why the non-calculous form, if maintained for any length of time, may lead to the calculous. The exit of the cystic duct, conforming to the rule for all hollow organs having storage functions, is not found at the lowest point but is elevated. When infection of the mucous membrane takes place a swelling occurs which may partially occlude the cystic duct, weakening the natural contractile powers, and thus interfering with the normal drainage. Stagnation of bile in the gall-bladder does not of itself lead to the formation of calculi, but when micro-organ-

†Read before the Richmond Academy of Medicine, Nov. 10, 1908.

isms gain access they multiply, producing a catarrhal inflammation with an abnormal formation of cholesterol and an excessive desquamation of the epithelium; these are the two chief factors in the production of gall-stones. We are unable to say why infection of the biliary passages should cause stones in one case while in others a similar infection would cause a simple cholecystitis with or without adhesions.

That this is a most common condition is convincingly demonstrated by the results of routine post-mortem examinations. In 10,866 autopsies obtained from the reports of Roth and others, there were 1,029 in which gall-stones were present, giving a proportion of 9.4 per cent. In America and England the percentage is lower. In 1,655 American cases there were 115, or 6.9 per cent., with gall-stones. Accepting these figures it is conservative to estimate that there are at least 5,000 cases of chronic cholecystitis and gall-stones in the city of Richmond, and I make the further assertion that every one of these cases is giving symptoms which when accurately observed could be traced directly to this disease. Do not misunderstand me to mean that the symptoms are the severe paroxysms of biliary colic, jaundice and rigidity of the upper right rectus, but symptoms which make their appearance in a more sympathetic structure—the stomach—such as gastralgia, indigestion, nausea and vomiting at times. The symptoms of rigidity, tenderness over the gall-bladder region, jaundice and a sharp rise of temperature are symptoms of gross pathological changes in the walls of these structures and the surrounding peritoneum, and when they do occur it would be safe to predict that the milder symptoms of gastralgia, indigestion, nausea and the so-called torpid livers have existed from 1 to 30 years, and in the vast majority of cases received medicinal treatment in a vain hope for relief. Just why the stomach should bear this burden of distressing reflex symptoms I do not believe can be thoroughly explained. That peristalsis in the gall-bladder is synchronous with that of the stomach during the height of digestion is accepted and conclusively shows their intimate relationship in the process of digestion.

The symptoms of biliary calculi are referable to several factors: severity of infection, degree of obstruction and the location of the stones. In typical cases where gross pathological changes exist the diagnosis could scarcely be overlooked by the most casual clinician.

The symptoms may be singly considered as follows: Pain is the most constant symptom of cholelithiasis. It is practically al-

ways present, may be dull in character and exaggerated upon taking food. It is this variety of pain which leads to a mistaken diagnosis of indigestion. It is usually due to some inflammation of the gall-bladder or passages and, as a rule, is diffused over the epigastric area. Tenderness in these cases can best be shown by the inability of the patient to take a deep inspiration while the examiner lays his left hand over the region of the liver so that the thumb can be pressed upward under the costal margin at the outer border of the right rectus muscle. When sudden pressure is thus made there is an instant contraction of the muscles producing a most characteristic and constant respiratory block.

Colic is not as common as formerly supposed. About 50 per cent. of the cases have never experienced biliary colic, but when present the suffering is intense. "These colics are usually in the epigastric region, a mid-line pain, radiating to both sides through the back and upward rather than downward. The pain begins suddenly, without regard to diet, exercise or time of day, quickly reaches its maximum intensity and lasts from a few moments to six or eight hours. The cessation of pain is as abrupt as its origin, and the feeling of relief is accompanied by vomiting, or the patient at once regains normal well being; there is no elevation of temperature and the pulse beat is not increased." (Mayo).

Jaundice, upon which so much stress has been laid, is absent in the great majority of cases, variously estimated at from 60 to 90 per cent. When jaundice is due to gall-stones it is nearly always preceded by colic, some hours after which the jaundice appears, as a rule coming on gradually, increasing until the obstruction is relieved when it slowly subsides.

Temperature does not develop unless the attack is prolonged and infection occurs, and is seldom high if infection is confined to the gall-bladder, and this is explained by Mayo as being due to the fact that the gall-bladder has few lymphatic channels and no lymph glands and, therefore, cannot readily absorb septic material. When temperature persists it usually means that there is an empyema or a severe extending infectious process.

That the diagnosis of cholecystitis or cholelithiasis is, or can ever be, an exact science seems impossible when we consider the intimate relationship of so many important structures in this region, and remember the fact that the palm of one's hand, when placed over the fundus of the gall-bladder, may cover a portion of the transverse colon, pyloric end of the stomach, duodenum, head of pancreas, right kidney,

and frequently a high post-cecal appendix. It has been called, especially by the internist, the area of abdominal romance; but from a surgeon's standpoint romance chiefly on the part of the internist, of indigestion, gastritis, gastralgia, etc., he failing to remember that these conditions are symptoms in the vast majority of cases of some organic lesion, in many instances of the biliary passages, and not a disease *per se* of the stomach. I believe a failure to make a proper diagnosis is due not to ignorance but rather to carelessness; carelessness in not examining the chronic complainers, carelessness in not obtaining accurate histories of the condition for which we are prescribing. How often do we hear the following history in a middle aged woman who has borne several children, and with a tendency to obesity, or in another who some years previously has had a typhoid infection: "Doctor, I have come to consult you for my indigestion, but before you prescribe would like to tell you that my doctor says I have a very weak stomach and I have to take something for it all the time. I was a healthy girl, but about fifteen years ago, some months after the birth of my first, second or third child, (which ever it may be) I began to suffer with indigestion and at times pain in my stomach. I am usually careful in my diet, but at times I break over and eat a hearty meal, expecting to have a severe attack, but strange to say, a hearty meal at these times does not always bring on my indigestion." On questioning her you elicit the fact that she has had severe spells of indigestion late in the night when she had been very careful in her diet, that they are apt to come on at any time of the day and sometimes many months elapse between them, that she has at times used the stomach tube, and gets great relief when she washes out lots of mucous. In her own words her liver is very torpid and it is absolutely necessary for her to take calomel every few months to get it acting. She has never had jaundice, never vomited any blood, never had any fever or severe soreness over the stomach, she suffers from constipation, and in spite of the indigestion is gaining in weight. On examination of the abdomen you find frequently a peculiar tendency to fatty deposit in the abdominal wall, you find the hypersensitive block to which I called your attention before, a safe diagnosis of gall-stones or chronic cholecystitis. Her parting remark, "Well, doctor, this is the first time my abdomen was ever examined in this way for indigestion," is rather apt to be true or else the diagnosis would not have been overlooked.

As firmly as I believe that all cases of cholecystitis and cholelithiasis give symp-

toms, so firmly I believe that all of these cases are surgical, and that any medical treatment directed toward relief of gall-stones is unscientific and based upon an improper knowledge of disease for which we attempt relief, an improper knowledge of the anatomical arrangement of these structures, and an improper appreciation of the gravity of some of the secondary changes which may arise from a simple cholelithiasis. When one realizes that a gall-stone may vary in shape, may vary in number from one to many thousand, may vary in size from a minute particle to a stone weighing several ounces, and that in addition the cystic duct is frequently occluded at some point between the stones and the cystic and hepatic junction, how absurd the use of drugs directed towards dissolving them or forcing them into the intestinal tract. That they are just as apt to lodge in the common duct as to pass on and produce one of the most distressing and dangerous conditions that can arise in this disease, jaundice and infection, in the presence of which surgical relief may become imperative and exceedingly dangerous. How then with these facts in mind can one advocate medical treatment if the patient's general condition will justify surgical relief is beyond conception. Medical treatment is indicated in the severe colics and this should be morphine hypodermically, $\frac{1}{4}$ grain. Next in importance is the stomach tube, many cases that cannot be relieved promptly by morphine will respond to a thorough stomach tube washing. (Ochsner).

Believing that nothing is to be gained by an elaborate outline of surgical technique and a description of the various operations upon the passages, I will not go into the details. It is generally accepted that in a properly executed operation for simple opening and removing stones from the gall-bladder with drainage, mortality is practically the same as that of an interval appendectomy. The question whether every gall-bladder that is diseased, or even a large percentage of them, should be removed is variously answered. As stated above, the gall-bladder does not seem to be necessary in health but that it is necessary for proper drainage of the liver and ducts in disease does appeal to us when we recall the pathology of the condition. Mortality is certainly higher where the gall-bladder is removed than where it is left, and as it is practically impossible to say when drainage of the passages is necessary I believe the safest and most satisfactory results in the end will be accomplished in a great percentage of cases by not removing the organ. I have seen cases in which the cystic duct seemed to be occluded and in which the

gall-bladder⁷ contained no bile, but after a few weeks of drainage the inflammatory occlusion subsided, the bile discharged from the fistula and the tract closed a few weeks later. In a few cases with a small contracted bladder and greatly thickened wall we have removed it. These cases also did well.

My experience in surgery of this region is based on 91 operations on the gall-bladder and passages since I have been the assistant and associate of Dr. Geo. Ben Johnston. A point of interest in this group of cases is that out of the 91, 68 were married women, 6 unmarried women, three of the latter gave a history of previous typhoid infection. In this series of cases the most prominent predisposing cause of this disease seems to be child-bearing, typhoid fever and obesity. The dangers from cholecystitis and cholelithiasis can best be shown by citing a few of the complications I have seen arise in the above number of cases. One case of severe hemorrhage with death 48 hours after operation of simple cholecystotomy. This patient was suffering from an intense and increasing jaundice due to obstruction of the common duct by three large stones. Because of the severe hemorrhage and the patient's general condition it was impossible to do more than drain the gall-bladder. Two cases of stones in the liver, one having an abscess in the liver substance from which several stones were removed. Two cases with perforation into the abdominal wall with abscess and stones. Three cases with perforation into the abdominal cavity, two with localized abscess, one communicating with the transverse colon through a fistula. Four cases of common duct stone, in one of these cases there were thirteen stones in the common duct and eighty in the gall-bladder. Eight cases with stones impacted in the cystic duct, in three of these cases where the gall-bladder was small and the walls much thickened we removed the gall-bladder.

In our ninety-one cases we had three deaths, one from hemorrhage cited above, one in a case where the abscess had ruptured in the abdominal wall, died of pulmonary embolus on the sixth day, one in a man 70 years of age, died seventh day after operation, cause of death unknown.

The percentage of common duct stones in our group is small compared with the statistics of many operators. The stones may have been overlooked, but when the patient's condition permitted it we have invariably made a systematic search.

Surgery of the Bile Tract.*

By John Egerton Cannaday, M. D., Charleston, West Virginia.

To operate or not to operate has been the eternal question in the treatment of gall-stones. The surgeon has said operate in all cases unless the condition of the patient renders it hazardous. He has said operate early as a prophylactic measure.

A few of the internists and some of the patients say leave the gall-stones alone unless they are kicking up too much of a storm; make use of palliative measures in regard to diet, medicine and hygiene and so carry around a small sized package of explosives liable to go off at any time. It seems to be almost a popular misconception with physicians that for gall-stones ever to exist clinically and surgically there must be the associated symptom group of pain, tenderness, colic, jaundice and clay-colored stools. This fallacious line of reasoning perhaps accounts for the exceedingly late stage at which many of these cases reach the operating table. As a matter of common observation many of these cases seek the surgeon at a time when the patient is intoxicated by infection and retention and when the coagulation period of the blood renders the operation extra serious in nature because of the hazard of hemorrhage.

The etiology, as we know, is bacteriological in its aspects. Typhoid, colon and the common pus bacilli find the gall-bladder and associated bile tracts a favorite resting point. Medical treatment I consider fallacious in the extreme because it is a treatment not of a condition but of symptoms. The patient may be fairly comfortable, even though carrying about with him a bunch of gall-stones as it is his privilege so to do if he wishes. Personally, perhaps, most of us would hesitate about seeking relief from a surgeon immediately after or during the first attack, yet we feel entirely different when the appendix is the offender. The difference in sentiment is largely a matter of education and nothing but time will set us right.

There are many reasons for operating, there are few for waiting. By operating early we protect the patient from a probable desperate hazard taken later in the hope of giving the patient a mere fighting chance for life. We protect him from the great disadvantages of work done in the presence of extensive cholemia, inanition, infection, suppuration, toxemia, intercurrent disease, etc. 75% of all gall-stones are formed in the gall-bladder. Bile is an excrement, the

*Read before the Virginia Medical Society, Richmond, Va., October, 1908.

liver a filter. Bacteria in the bile tract may come from the liver as well as from the duodenum. An inflamed gall-bladder is much like an inflamed appendix and as a rule needs removal. The three most persistent signs of gall-stone disease are pain, tenderness and tumor. The pain is most marked over the region of the gall-bladder and under the scapula, or it may be referred to the usual location of the appendix. Constipation and clay-colored stools may be present, jaundice is seldom seen except in late stages. In examining the gall-stone suspect the most advantageous position is for the patient to be seated undressed to the hips, with the back to the examiner. The patient bends forward hands on knees. The examiner places one hand on each side of the abdomen just below the costal margins. The patient breathes deeply and at each expiration the hands sink more deeply, the ulnar border turning inward so that the finger tips are directed upward—when the tender gall-bladder comes near the upward pressing finger tips during inspiration which forces the liver downwards, pain is felt and the act of breathing is suddenly stopped.

A facet on a gall-stone indicates others and is produced by pressure on others when in a plastic state. Most authors look on gall-stones as the exciting cause of carcinoma of the bile tract. Gall-bladder pathology is best learned at the autopsy *in vivo* rather than in dead house studies of the last stages. Infection of the bile tract is, broadly speaking, divided into the calculus and non-calculus forms. The formation of gall-stones is the result of a mild infection with an attenuated culture of slight virulence. We have various forms of inflammation of the gall-bladder to deal with, catarrhal, purulent, hemorrhagic, ulcerative and gangrenous. Cases of primary gall-bladder disease seldom give the surgeon trouble, the neglected ones make his path thorny. The intimate association of the gall-ducts with the pancreas explain in part the frequent inter-relation of diabetes and gall-stone disease. Achilles Rose traces a relation between atonia gastrica and cholelithiasis due to bile stasis leading to infection and subsequent stone formation. Cholecystitis and cholelithiasis should be no longer considered medical diseases, as the consequences of treating them as such is fraught with too much danger. The absence of gall-stones at an operation in chronic cholecystitis does not prove that none have passed, or preclude the possibility of their having been previously present.

Kocher finds it difficult to determine previous to operation the seat of the pathological lesion. He has had cholelithiasis recur

four times in fifty cholecystostomies and one in thirty cholecystectomies. Stone in the common duct does not necessarily produce jaundice, which is a symptom in not more than one-third of the cases. A large percentage of cases of supposed indigestion with pain in the epigastric region are due to gall-stone disease. Among the infrequent possibilities of gall-stone disease are stricture and even atresia of the common duct. Gangrene of the gall-bladder is even more rare than gangrene of the appendix and requires still more prompt action for its relief. Biliary concretions produce an entirely different set of symptoms, complications and dangers, according to their position in the gall-bladder, cystic or common duct; for while gall-stones in the gall-bladder may produce little or no discomfort in the absence of infection, and may be present for years without being recognized, until the onset of catarrh or some more acute infection or possibly until the advent of malignant disease, yet as soon as they leave the gall-bladder and enter the cystic duct, the well known seizures of biliary colic occur without jaundice or with a very slight icteric tinge in the conjunctivae, due to the extension of catarrh along the ducts.

According to the size of the stone in relation to the ducts and the intensity, or otherwise, of the associated catarrh, the symptoms may present every variety, from mere evanescent spasms, usually called indigestion, to violent colic agonizing in character and not easily mistaken for any other disease, and in which the pain may be so acute as even to lead to collapse and sudden death.

Obstruction of the cystic duct leads to another set of symptoms, in the shape of retention of inflammatory products and the development of a tumor due to distention of the gall-bladder either with mucus, if the catarrh is only moderate in intensity, or with muco-pus if the inflammation be virulent. If the inflammatory process be very acute, phlegmonous cholecystitis, or even gangrene of the gall-bladder, may occur; and associated with this acute inflammation a local protective peritonitis nearly always develops, and leads to great augmentation of the original tumor by visceral adhesions.

Perforation of the bile passages, general peritonitis, abscess, septicaemia, pyemia, and other serious complications may then follow. All these symptoms, and many others, may occur without any evidence of jaundice, as they are quite compatible with a perfectly patent common bile duct, and therefore with an absence of interference with the important excretory functions of the liver.

In rare cases a large gall-stone impacted

in the cystic duct may, by pressure on the common duct and on the portal vein, cause both jaundice and ascites, and may thus lead to an error in diagnosis. If in the more chronic cases, at the same time the gall-bladder is distended, the combination of symptoms will give rise to a suspicion of malignant disease, or if the gall-bladder cannot be felt and there are rigors and other signs of infective cholangitis, common-duct cholelithiasis will be suspected.

As soon, however, as a gall stone enters the common bile duct, an entirely different train of symptoms occurs, and serious as the other conditions I have mentioned may be, yet a greatly enhanced series of dangers arises from an interference, not only with the excretory function of the liver, but also with the secretory and metabolic functions of the pancreas.

The surgical complications of gall-stone disease are so many and of such importance that I append a list:

1. Ileus due to paresis of the bowel leading to enormous distention of the abdomen and to the symptoms and appearances of acute intestinal obstruction, apparently the consequence of the violent pain.

2. Acute intestinal obstruction dependent on—

(a) Paralysis of gut due to local peritonitis in the neighborhood of the gall-bladder.

(b) Volvulus of small intestine.

(c) Stricture of intestine by adventitious bands, originally produced as a result of gall-stones.

(d) Impaction of a large stone in some part of the intestine after ulcerating its way from the bile channels into the bowel.

3. General hemorrhages, the result of long continued jaundice, dependent either on gall-stone alone or cholelithiasis associated with disease or with interstitial pancreatitis.

4. Localized peritonitis, producing adhesions which may then become a source of pain, even after the gall-stones have been got rid of. I believe that nearly every serious attack of biliary colic is accompanied by adhesive peritonitis, as experience shows that adhesions are found practically in all cases where there have been characteristic seizures.

5. Dilatation of the stomach dependent on adhesions around the pylorus.

6. Ulceration of the bile passages establishing a fistula between them and the intestine.

7. Stricture of the cystic or common duct.

8. Abscess of the liver.

9. Localized peritoneal abscess.

10. Abscess in the abdominal wall.

11. Fistula at the umbilicus or elsewhere on the surface of the abdomen, discharging

mucus, muco-pus or bile.

12. Empyema of the gall-bladder.

13. Infective and suppurative cholangitis.

14. Septicemia or pyemia.

15. Phlegmonous cholecystitis.

16. Gangrene of the gall-bladder.

17. Perforative peritonitis due to ulceration through or to rupture of the gall-bladder or ducts leading to extravasation of infected bile into the general peritoneal cavity.

18. Pyelitis on the right side due to a gall-stone ulcerating or an abscess of the gall-bladder bursting into the pelvis of the kidney.

19. Cancer of the gall-bladder or ducts.

20. Subphrenic abscess.

21. Pleurisy or empyema of the gall-bladder.

22. Pneumonia of the lower lobe of the right lung.

23. Chronic invalidism and inability to perform any of the ordinary business or social duties of life.

24. Gangrenous or suppurative pancreatitis.

25. Chronic interstitial pancreatitis.

26. Infective endocarditis.

27. Cirrhosis of liver.

28. Appendicitis due to extension of inflammation from gall-bladder or to impaction of gall-stone in the appendix."

Our text books, up to within a very short time, have been misleading, not only in the interpretation of symptoms but in recommending the proper management of these cases when diagnosed. It was generally advised that an operation on the ducts or gall-bladder be not performed unless jaundice was severe and persistent colic lasting and of frequent occurrence, or when there was evidence of pus in the gall-bladder. All of which are very late manifestations of biliary tract disease. Gall-stones themselves, since they cannot form in a few days, are late manifestations of pre-existing disease.

As soon as gall-stones give trouble their removal by operation is the most rational method of treatment, since it is only from the complications, which usually rise sooner or later, that danger from operation need be apprehended. When gall-stones have once formed no medical treatment known to us can remove them, though medical measures often can do much for the relief of catarrhal conditions of the gall-bladder. But by all means after medical measures have had fair trial, surgical relief should be attempted.

No surgeon should attempt the removal of gall-stones unless he is prepared for any of the various operations on the biliary passages, as it is impossible to say beforehand what may be required. The frequency of gall-stone disease is shown by the fact

that ten per cent. of autopsies bring stones to light, the symptoms of this trouble are all too often attributed to something else. In cases where a positive diagnosis cannot be made exploratory incision should be unhesitatingly recommended, as in good hands it is practically free from danger and is pregnant with possibilities for good.

Operative treatment is indicated generally speaking in all cases of gall-bladder disease, unless, of course, there are special risks to be run by waiting. I would as earnestly and conscientiously advise operation in gall-bladder disease as I would advise the removal of the diseased appendix. When a patient presents himself with a history of indigestion, occasional attacks of pain or tenderness, or both, over the region of the gall tract and may be at times jaundice, colic or other of the severer symptoms commonly looked for, a surgeon should be consulted. We must carefully investigate and scrutinize with a view to operation when the slightest sign of appendicitis turns up. Indeed, most patients affected with this disease are quite equal to the occasion and make their own diagnosis at an early date. Why should we have so many scruples and so much dilly-dallying over a case of gall tract disease. From the nature of things case for case the mortality in bile tract has been fairly high. There are several reasons for this. The work presents technical difficulties that may only be overcome by the proper exercise of surgical ability and skill which has been well trained in the particular technique of the operation required.

Active indications for gall-stone operations are: "1. Presence of any symptoms seriously interfering with patient's mode of life. 2. The failure of medical treatment. 3. Acute suppurative cholecystitis or cholangitis. 4. Acute suppurative chronic obstruction of the cystic duct. 5. Persistence of acute obstruction of the common duct. 7. Perforation. 8. Cases in which there is a suspicion of primary carcinoma of gall-bladder."

Operation is contraindicated in: "1. Acute obstruction of the common or hepatic ducts, in the belief that the stone may pass through the common duct into the duodenum and no others are present to produce a new attack. If fever, however, is associated, indicating suppurative cholangitis, operation should be performed with drainage of the hepatic duct. 2. Very old or stout individuals, or those suffering from diabetes, arteriosclerosis, cardiac, pulmonary or renal disease. 3. Extensive carcinoma of the biliary passages.

The precise nature of the operation will remain in the balance frequently, until after

the exploratory incision has been made, and the exact condition of the gall-bladder and biliary passages determined. Depending upon conditions found in the gall-bladder the operation will be cholecystotomy, cholecystostomy, cholecystendysis or cholecystectomy; if the calculus is implanted in the cystic duct cysticotomy; if in the hepatic duct hepaticostomy, hepaticotomy, or hepaticolithotripsy; if in the common duct, choledochotomy, choledochostomy, cholecystenterostomy, choledochointerostomy, choledochectomy or hepaticoduodenostomy."

Preliminary to any attempt at exposure of liver or bile ducts that part of the anatomy must be supported and brought prominently forward by a sand bag placed under the back a little above the level of the liver. If in addition to this a slight Trendelenberg position is adopted, the feet being about eight inches lower than the head, the intestines will fall away from the incision exposure and increase the access. The incision that gives the freest access is that of Mayo Robson. The first vertical is made through the right rectus through its outer border and is about five inches in length—the upper end beginning at the costal margin—when more room is needed the vertical cut may be lengthened downwards or its upper extremity may be carried upwards and inwards, dividing a portion of the recti fibres not far from their insertion into the costal margin. In perhaps a greater portion of cases if the anterior and posterior muscle sheaths are incised the muscle itself can be retracted well toward the ensiform appendix and sufficient room be given. It is never advisable to make the peritoneal incision to the margin of the wound since that membrane stretches readily. In thick abdominal walls there will be an advantage in making the skin and fat incision two inches longer than the fascial cut. Large gauze sponges with safety tapes attached should be systematically and judiciously placed so as to hold the intestines out of the way and at the same time be a preventive of possible contamination from the opened bile tract. In packing it is well to place gauze on the left hand side of the gall-bladder, then below and finally on the right side. Kehr and Courvoisier make incisions of phenomenal length, but they are rarely really necessary and often a disadvantage for the reason that they will allow the intestines to prolapse through the wound. Next the pathology is located, if possible, and liver and gall-bladder adhesions if so placed as to interfere with the work at hand are broken up. Much care must be taken for the prevention of bleeding and tearing of the hollow viscera. The bile tract can

then be thoroughly inspected by sight and palpation. The gall-bladder and liver together are seized in the gauze-covered gloved hand and gently drawn downward and from under the shelter of the ribs, when this first step can be effected it will be an easy matter to rotate the liver so that its under surface presents upwards and forwards. The cystic and common duct are brought into almost a straight line and almost on a level with the skin, in most subjects in those having very thick abdominal walls the exposure can not be so favorable. In some cases, thin women particularly, the common duct can be brought outside the wound. If the stones are present in the gall-bladder they are dealt with by cholecystotomy or cholecystectomy. The former will always be the desirable operation in a considerable number of cases for the reason that it can in appropriate cases give the most speedy relief. It will be at times useful as a palliative and temporizing measure. Preliminary to more radical procedure when the strength of the patient justifies it. To attempt a complete operation in some cases that are very feeble means almost certain death. This operation was first performed by Dr. Marion Sims about thirty years ago. That was the first step in a revolution soon to be brought about. Thenceforward gall-stone disease was the property of the surgeon. The fundus of the gall-bladder is drawn up as far as possible without undue traction and well packed around with gauze sponges—with a good sized aspirator the contents are emptied, while this is going on the bladder is seized on either side of the needle with a pair of hemostats. The fundus is opened with the scissors to the extent of about three-fourths of an inch. The stones can easily be removed with a gall-stone scoop. The ducts are again inspected with the fingers and if there are stones in the cystic or hepatic ducts it may be possible to dislodge and milk them into the gall bladder. A drainage tube usually about one-third of an inch in diameter is inserted well into the gall-bladder, going almost down to the cystic duct opening. The tube is fixed by a plain catgut stitch which passes through all of the coats of the gall-bladder except the mucosa. The tube is further secured by a purse string suture which is tightened while the tube is being invaginated into the bladder, or it may be covered over by the usual gastrostomy stitch. If the tube is fastened in this manner there will be no leakage. The gall-bladder is dropped back in the abdomen and the tube brought out through a separate stab incision and the operation wound entirely closed. Formerly it was the fashion with many to fasten the gall-bladder to the parietal peri-

toneum by a few sutures, but this is unnecessary since omental adhesions form around the tube in a few hours and make the drainage strictly extra-peritoneal.

Stones in the cystic duct may be loosely floating or impacted—needling or crushing are rather unsurgical and seldom resorted to today. Removal of the cystic duct along with the gall-bladder or opening the cystic duct—cysticotomy are preferable—after the latter operation it may be necessary to use a drainage tube. If the duct is sutured fine catgut should be used and the mucosa should not be penetrated.

The operation of cholecystectomy, while giving surgically more ideal results, does not at the time add perceptibly to the risk of operation.

The indications for this operation are:

1. "Injuries of the gall-bladder, rupture, stab or bullet wounds.
2. Gangrene of the gall-bladder.
3. Phlegmonous cholecystitis.
4. Membranous cholecystitis.
5. Chronic cholecystitis with dense thickening of the walls of the gall-bladder and cystic duct, with or without stenosis of the cystic duct, and in chronic cholecystitis, when the gall-bladder is shrivelled and puckered and universally adherent. In such cases it is no longer a receptacle for the bile.
6. Distension of the gall-bladder, hydrops or empyema due to blockage of the cystic duct by calculus, stricture, growth or external inflammatory deposits, or in cases of mucous fistula following operations for these conditions.
7. Cases of fistula between the gall-bladder or the cystic duct, on the one hand, and the stomach, duodenum, or colon on the other.
8. Multiple ulcerations of the gall-bladder or the cystic duct, when the gall-stones have eroded their way through the walls into the liver, the duodenum or the other protective adherent masses.
9. Primary carcinoma of the gall-bladder."

About this operation there are many differences of opinion and a few would restrict it to cases of irremediable obstruction of the cystic duct. This operation has one disadvantage that at times may be of serious import. It will make a second operation more difficult and dangerous. For stones may at times form in the hepatic and common ducts, but this possibility is rather remote. Cholecystectomy as an operation has developed since the eighties. One may begin at the base of the gall-bladder or begin at the cystic duct, the latter by preference. The cystic duct and artery are ligated separately—with the gauze-covered finger

the gall-bladder is separated from its fossa. It is next removed by the division of its peritoneal folds about half an inch from the liver so as to leave sufficient covering for all raw surfaces. Before suturing this oozing is stopped by the hot compress, or in rare cases it may be necessary to pass a suture of catgut through the liver tissue and tie gently. The blunt pointed needles of Kousnietzoff are useful here. Ten day chromicized catgut for the duct ligature and plain gut for the peritoneal sutures will generally suffice. Drainage will seldom be necessary, though a number of operators drain all liver cases, even when closing all other clean sections, which looks a little like a fad.

Gall-stones in the hepatic duct may usually be removed through the common duct. If located much above the bifurcation in the liver substance they probably cannot be removed. If a stone be removed from this duct by incision the wound should be carefully sutured and drainage provided for in case of a leak. It occasionally happens that the hepatic or common duct may become enormously dilated through obstruction and contain large quantities of bile or mucous.

The common duct may be obstructed by stone at any point, in fact I have seen both it and the hepatic duct impacted from end to end with gall-stones. The common duct may be approached from above the duodenum and through the duodenum. It is practically always advisable to drain the common duct after opening it to remove gall-stones. The duct is usually large enough for exploration with the finger and small forceps, or a gall-stone scoop can be easily passed. Care must be taken to prevent soiling of the operation field and the drainage tube must be carefully sutured in place. When a stone is impacted in the ampulla of Vater or anywhere in the third portion of the duct the transduodenal route will be nearly always necessary. The operation of cholecystenterostomy will seldom be necessary, as the common duct can be anastomosed with itself or the duodenum without any great difficulty.

Fetal Achondroplasia with Alterations of the Placenta.—Marconi (Ann. di Ostet. e Gin.) describes a case of macerated fetus combined with enormous placenta, much altered in constitution, occurring in a woman who had shown some evidences of syphilis. The limbs of the fetus of seven months were very small, entirely out of proportion to the size of the body. The skeleton was so little developed that the author denominates it a case of achondroplasia. The placenta was enormous, pale in color

and friable. Some of the villi were of normal size, while others were large and entirely destitute of blood-vessels. He says the achondroplasia is the result of the alterations in the placenta, which were due to some infective cause, perhaps syphilis. The changes are truly toxic in origin, the toxin producing a disturbance of function in the placenta and an alteration in development as a result. There is some evidence to show that such deformity is hereditary.

The After-treatment of Abdominal Operations.—McKay, in The Australasian Medical Gazette, gives his experience of some new drugs. For tympanites, salicylate of eserine used hypodermically in doses of 1-50 gr. has a wonderful effect, flatus being passed fifteen minutes after its administration. The beneficial effect is aided by the administration of an enema composed of mag. sulph., glycerine, and water given as soon as the drug begins to act. The dose may be repeated once in six hours without danger. A 10-grain dose of veronal usually gives a long and restful sleep, the patient awaking without headache or nausea. To help the veronal, or if there is pain, heroin, 1-20 gr. hypodermically, is very effective. It causes neither constipation nor tympanites, and is seldom followed by vomiting. For shock, adrenalin, salt solution, digitaline, strychnine, and carbonate of ammonia by enema are recommended. The best results are obtained by injecting a quart of saline under the breast, and then giving 5 minims of adrenalin hypodermically 20 minutes later.

A Case of Traumatic (Maternal) Birth Palsy.—Herzog (Deutsch. Arch. f. klin. Med.) bases the following conclusions upon statements contained in the literature and upon personal observation of the condition in an adult female patient:

The predominating involvement of the peroneal nerve in this form of palsy, and the distribution of the paralysis in the areas supplied by it, is explained by the topographical situation of the nerve in the pelvis, and its relatively considerable exposure. The external muscles of the leg receive their nerve supply from the lumbar cord alone, the *aeronei* from the lumbosacral plexus. In traumatic paralysis, with uniform injury of the entire peroneal nerve, the *peronei* muscles are least liable to suffer, as offering the least resistance. The forceps is not supposed to be a factor in the etiology of traumatic peroneal palsy, which is to be explained rather by the prolonged duration of labor. The course of these palsies is protracted, and their prognosis not very favorable.

Charlotte Medical Journal

Published Monthly.

**EDWARD C. REGISTER, M. D., EDITOR.
CHARLOTTE, N. C.**

EDITORIAL COMMENT.

The pages of the February number of the Journal were taken up almost exclusively by the Transactions of the first meeting of the North Carolina Association for the Prevention of Tuberculosis. The editorial section was omitted for the reason that it was deemed best to publish these Transactions all in a single number rather than to divide them in separate issues. On account of their voluminousness practically all other matter was carried over. It is unnecessary to comment on the meeting of this Society or upon the excellence of the papers presented and the interest and enthusiasm manifested in discussion. They speak for themselves. The Journal has only hearty encouragement and the most cordial good will for the North Carolina Society for the Prevention of Tuberculosis, a spirit which, we believe, has received abundant exemplification at our hands. Its aims are the very highest, its motives the purest and noblest. The most genuine philanthropy has actuated those whose efforts have culminated in the very successful meeting held recently in Charlotte, and unstinted praise is due to those who have unselfishly given both time and labor toward organizing and carrying forward a movement which is so pregnant with good for our State. According to their own confession, it was with some degree of trepidation that four doctors met together, during the meeting of the North Carolina State Medical Society at Winston in June, 1908, and launched the organization which resulted in the Charlotte meeting, at which a goodly number of North Carolina's foremost doctors were present. There were also a few visiting laymen; and a good attendance of Charlotte citizens gave no little encouragement. Thus were the hopes of the instigators vindicated and there is, therefore, every reason why this Society for the Prevention of Tuberculosis should grow and prosper and become the most powerful factor in North Carolina in the final eradication of the most terrible plague of the age. The Journal stands ready to lend what assistance it may in prosecuting the greatest fight of all history.

UNIVERSITY OF MISSISSIPPI MEDICAL DEPARTMENT.

The University of Mississippi will, in September, 1909, expand its Department of Medicine to a full four years course. Five

years ago the Medical School of this University began its career. However, on account of the lack of clinical advantages only the first two years were given. In 1908 the University acquired control of the Mississippi State Charity Hospital at Vicksburg with the end in view of expanding the school to the status of a high grade medical college. As heretofore the first two years will be offered at Oxford and the last two at the Charity Hospital in Vicksburg, where there is great abundance of clinical material and every advantage which could support a thoroughly up-to-date medical school. An unusually strong faculty for the Vicksburg Department has been appointed, composed of men who have years of experience and can claim considerable eminence. The faculty is composed as follows: Hugh H. Haralson, M. D., Tulane, Professor of the Theory and Practice of Medicine; Sylvan Myers, M. D., University of Pennsylvania, Professor of Therapeutics and Clinical Medicine; Benson B. Martin, M. D., Tulane, Professor of Theory and Practice of Surgery; E. F. Howard, M. D., Tulane, Professor of Obstetrics and Pediatrics; Sydney W. Johnston, M. D., Tulane, Professor of Clinical and Operative Surgery.

The following assistants and instructors complete the faculty:

Theory and Practice of Medicine—J. S. Ewing, J. H. Fox.

Surgery and Gynecology—H. F. Sproles, Jr., T. M. H. Bell.

Obstetrics and Pediatrics—J. A. K. Birchett.

Clinical Medicine and Therapeutics—Vincent Bonnell.

Clinical and Operative Surgery—J. A. Austin.

WOMEN AS PHYSICIANS.

The time has certainly passed when it can be said that a woman who writes "M.D." after her name is a curiosity, and we surely would not be ungallant enough to say there are not many worthy women physicians. Certainly they have earned the right to equality with men in the field of medicine. And yet one wonders what becomes of all the young women who are annually graduated from the medical schools. Many of them hang out their shingles and some doubtless succeed in winning success as medical practitioners. Some, surely, cannot resist the blandishments of the little love god and so become transformed, as women should always be, into mothers—a responsibility which can ill be shared. Nevertheless, perhaps the majority of them continue in some line of their chosen profession. The great development of medical research work in recent years has afforded an important

field for women trained in medicine, and it is admitted that women have proved even more expert than men in certain lines of investigation, those especially which demand close attention to details. Every year the research laboratories, those maintained by private gifts, and those connected with the health departments of cities, states and educational institutions absorb many young women medical graduates. They are highly proficient in pathological and bacteriological work. They like it, find it more and more absorbing, and so, usually, end by making it their life's work. Hundreds of women physicians in the great cities and educational centres are doing important things in medicine, and yet how little is heard of them! They seem to be peculiarly adapted for medical research work. They are painstaking. They delight in nice work; that is, intricate work requiring a careful use of the hands. Then, too, they go into the work more thoroughly, for they make it a career, whereas men, as a rule, take up medical research as incidental to practice. The American Association of Pathologists and Bacteriologists, the Pathological Society and the Academy of Medicine and other learned medical societies include in their membership many women who are recognized by their fellows as capable scientists.

All this is true, without a doubt, but still the fact must be kept in mind that there have been very few women physicians who have shown great abilities in accomplishing original work. They can do the things which require nicety of detail and painstaking care, but it is a fact—and we intend no indelicate thrust at her abilities—that relatively few have given evidence of considerable independence in their work. We have heard a man, whose name as an original investigator is known throughout the length and breadth of the land, say that as laboratory workers where it is simply a question of neatness and expertness of work with the hands women excel, but beyond mere detail and accuracy relatively few are able to go.

After all is said, however, and although it means that women have usurped men's places in the medical profession, as they have done in practically every other line of work, we are not so narrow as to believe she has no place in modern life beyond the making of home and self beautiful.

SOME THOUGHTS ON TYPHOID FEVER.

Relatively, but a few years have passed since the typhoid bacillus was isolated and described by Eberth. Indeed, speaking relatively, it has not been a great while since the disease to which we apply the name typhoid fever emerged from obscurity and

came to be recognized as a well defined clinical entity. During many years it has been believed and taught that typhoid fever is caused by a specific germ, the presence of which alone could give rise to the disease. Slowly, however, the fact became known that cases which clinically were typhoid fever occurred when bacilli were present which differed in some ways from the typhoid bacillus. Accurate study and investigation demonstrated the para-typhoid germ and taught us that there is a disease to which the term para-typhoid fever may be applied. More recently it comes out that para-typhoid is only a group name, since at least two varieties of para-typhoid germs have been distinguished. Furthermore, it has been demonstrated that the common colon bacillus, a normal inhabitant of the intestinal tract in both man and animals, and normally apparently harmless, since it gives rise to no symptoms, may, under certain conditions, assume a marked degree of virulence, and, in some cases, give rise to a condition indistinguishable clinically from typhoid fever. Still another germ capable of originating disease which cannot be distinguished from typhoid fever is called *bacillus fecalis alcaligenes*. It therefore becomes necessary to modify somewhat pre-existing views with respect to the etiology of what is termed typhoid fever. It is no longer an etiologic entity, but we must understand that the term is applied to a state due to infection with various micro-organisms of the coli group—not necessarily the *Bacillus typhosus*. In this group, according to Major Statham, may be included: 1. *Bacillus fecalis alcaligenes*. 2. *Bacillus typhosus*. 3. *Bacillus paratyphosus*, A. 4. *Bacillus paratyphosus*, B. 5. *Bacillus coli*. And the story is not yet ended.

According to Landouzy there is a condition—rare he admits—caused by the *tubercle bacillus* which simulates typhoid very closely. To this condition he applies the term "*typho bacillose*." True it has been known for a long time that acute miliary tuberculosis may resemble typhoid fever so closely as to be clinically indistinguishable from it, but in acute miliary tuberculosis recovery never takes place. On the other hand *typho bacillose*, according to Landouzy, often ends in recovery or, at any rate, in the abatement of the acute general infection. The disease, however, is not cured; it remains latent during a variable period only to make its presence definitely known sooner or later.

The problem of typhoid fever, always complex, thus becomes a more complicated one than ever. In the face of such facts it would seem that one could be sure of his diagnosis only after employing the assistance of every possible laboratory and clinical

cal test. And doubtless this is true. In fact every case of what is called typhoid fever should be studied, not only in the light of symptoms, but bacteriologically as well. It required long years for the knowledge to dawn upon mankind that typhus and typhoid fevers were not one and the same disease. It is only with the help of bacteriology that those who painstakingly investigate every case of supposed typhoid are realizing that we are dealing not with an entity but with a great group of diseases. No subject in the whole range of medicine offers a field of study so inexhaustible. Only a few years ago it seemed that we had learned about all there was to be learned about typhoid fever—excluding always, of course, the problem of treatment—but we are, to all intents and purposes, merely entering the threshold of the temple of knowledge. When we fancied that it was known with considerable accuracy how the infection is conveyed from person to person, we awoke one day to the knowledge that people who have had the disease become, in a considerable proportion of cases—about 3 to 4 per cent.—themselves chronic bacillus carriers. And then as a sequel, it is established that persons even who have never had the disease may harbor the germs and distribute them hither and thither. With these facts before us and the further knowledge kept in mind that a great group of bacteria are culpable of causing what is called typhoid fever, the menace assumes an aspect, to say the least, overpowering in its possibilities.

THE TREATMENT OF MECHANICAL OBSTRUCTIONS TO DELIVERY.

No subject connected with obstetrics has been discussed more effectively of late than the intra-pelvic versus the abdominal method of dealing with mechanical obstructions to delivery in cases of confinement.

In the choice between the intra-pelvic and abdominal methods of delivery in the lesser degrees of mechanical obstruction, the relative maternal and fetal mortalities to be expected of the different methods should be considered. Before deciding upon any operative procedure, it is to be borne in mind that although spontaneous delivery of a fully developed child cannot occur when the conjugata vera measures 7 centimetres or less, above this limit it will take place in a large percentage of cases.

As far back as 1901, Williams reported 278 cases of contracted pelvis in which nearly 78% ended in spontaneous labor, while in 972 contracted pelves occurring out of a total of 10,000 cases at the Sloane Maternity, 66.3% ended without interference. Edgar reports 70.59% as terminating normally.

The moulding of the foetal head during labor must always be considered, and although pelvic measurements are a necessity for routine examinations of patients, the external measurements are not always to be relied on; not infrequently they will be normal and yet the internal examination will reveal a marked contraction of the pelvis.

Frequent and careful examinations of the patient in suspected cases will usually prevent difficult obstetric operations, and it is important to determine as accurately as possible the size of the foetal head and its relations to the pelvis.

The methods at our disposal for ascertaining this are not always satisfactory, so that Perret has devised a special instrument for measuring the occipito-frontal diameter through the abdominal wall, and he estimates the bi-parietal diameter as two centimeters less than that measurement. But for a final test most reliance is to be placed on Muller's supra-pubic pressure. An anesthetic will in some cases be necessary to accomplish the examination properly.

Many American physicians have followed the French and German teachings in condemning the induction of premature labor in cases of contracted pelvis, on account of the high foetal mortality. So far as the major degrees of pelvic deformity are concerned it is generally agreed that induction of premature delivery should not be resorted to on account of the high foetal mortality. In the lesser degrees of contraction it is probable that Norris and Hirst are right when they state that the skillful induction of labor during the last weeks of pregnancy should always be carefully considered. Many patients are often lost through errors in obstetric judgment after version or difficult forceps delivery, who might have been saved by this operation.

Hirst reports several hundred cases of induced labor, and states that a conjugata vera of about eight centimeters may result in a safe and easy delivery during the last month of gestation, which at term would require Casarean section or pubiotomy. The mortality of premature infants is probably no greater than that of infants born at term in uncomplicated labors.

Little need be said regarding version or the application of the forceps, as no recent advancement has been made along these lines, other than that they are valuable obstetric procedures.

It would appear that the tendency at present is to more frequently resort to the forceps than to version and a better knowledge of the mechanism of labor and newer and more perfect axis traction forceps have made the interferences with this instrument

the preferred ones with most physicians.

When the conditions are such that extraction is possible without hard pulling, the intra-pelvic operations under modern conditions, and in skilled hands, are fairly free from danger.

The elective Cæsarean operation at the beginning of labor, when properly performed, has at present no greater maternal mortality than the intra-pelvic operations at the time of their election.

THE TRAINED NURSERY MAID.

The problems of rearing a baby through its first two years of life in a correct and hygienic way are often of greater magnitude than the average young mother realizes. The average woman is seldom prepared by accurate training or study to know how and when to feed the new baby. What the temperature of its bath should be. What precaution should be taken to keep its eyes, ears and mouth from infection. When to take it in the open air. The danger of substituting artificial food for the natural breast milk, and a hundred other things that a trained nurse maid is taught in the first few months of her course.

The fact that the most important business of a woman's life, the one most strictly feminine and considered outside the grasp or possible accomplishment of mere man has only been taught her by the ancient and uncertain method of tradition, seems strange to contemplate. One older woman instructs another in a desultory fashion. Usually the baby's grandmother, who, in all probability, has not had a baby to tend for fifteen or twenty years, and often much longer, gets out her stock of ancient lore and hastens to her daughter's bedside to assume the care of the young citizen according to what she happens to remember she did for her own, be the methods good, bad or indifferent. The doctor usually after his long, tedious, and often poorly paid hours of work and waiting due the mother at her delivery hastens away and leaves the baby to the women folks. Even the trained nurse who may be in evidence these advanced days, too often, has received all her training in a surgical and medical institution in which the obstetrical cases were rare and isolated occurrences and the consideration of the infant has been of but secondary interest, as the mother has always held the center of the stage in the minds of most physicians, even those that make a specialty of obstetrics. So babies have struggled along the best they could on tradition. No wonder that such a large number die in their first two years of life, and no wonder that such a majority of such deaths are among the first born of these young mothers.

The inference is that as mothers grow more wise by observation of each successive child born she becomes more skillful in their care and is more successful in their training.

But is this not a costly way for gaining skill in so important and so obvious a duty? The demand is beginning to be felt for a trained helper to assist the young mother over these hard places when the grandmothers are not in evidence or when the spirit of progress has the temerity to whisper the suspicion "Does grandmother really know after the lapse of twenty or more years just what is correct for this new and precious family representative?" And young women are finding a new profession as trained nursery maids, whose sphere it is to take the supervision of the young child after the obstetrical nurse has been released and become the mother's helper after the most approved methods of all the specialists on the care of babies, well ones, not sick ones, and busy enough she finds herself watching their proper growth, giving the mother instruction, going into the science of food values, preaching the gospel of fresh air, guarding against bad habits, both physical and mental, and preventing the contraction of contagious diseases that take so much from a child's progress if they do not result fatally when contracted in early infancy.

It is to be hoped that the education offered to our young girls in our public schools will soon take a more practical turn and include facts that form a foundation to right physical living. That food values, fresh air and normal growth will be understood so early that the study of the science of baby tending will come easy and not require an extended special training, though it certainly is a subject worthy the year of training which the nurse maids' schools devote to it. It is certainly a wholesome sign of progress when schools for this special purpose are springing up in several of our cities and refreshing to know that bright, capable young women are lending themselves to the work. They are laying up professional skill that will certainly be a comfort to them when they take up married life themselves and have young children of their own who will not have to borrow a grandmother to boost them on in life.

MENTAL DEFECTIVES AMONG GRIMINALS.

The officials of reformatories and juvenile asylums have long been cognizant of the large number of mental defectives that are sent them by the courts. Mental examinations have shown that thirty-seven per cent. of the total number received are classed as mentally abnormal. These youths can be

divided into two groups: the congenital and the acquired defectives.

The first class is often the offspring of degenerate or criminal parentage and their sequential inheritance is unavoidable. The mental weakness of this type is usually demonstrated by the lack of moral susceptibility. They see nothing uncommon in their criminal acts and have a specious argument for all offences.

The acquired mental defective is usually the result of environment. The conditions that surround the growth and development of the young in the slums of the large cities are largely responsible for this class. Frequently he is born from decadent stock. His physical condition is poor. He has not had the opportunity to develop under favorable conditions. Usually early denied the opportunity for intellectual improvement, this youth is seriously handicapped, even in the reformatory schools. In demeanor, the conduct of this type is variable and they are best divided into two classes: general defectives and control defectives.

The general defectives are unable to progress in their school, trades or classes. These, after all is done, are capable of but little improvement.

The control defectives, while making fair progress with their intellectual tasks, seem to be entirely lacking in self-restraint. The animal in them is forever uppermost, and their impulses are usually beyond the control of their minds. In their case punishment is unavailing and will produce but negative results.

Notwithstanding the defective mental condition of these youths, the optimistic reformers persist in their efforts to produce desirable citizens from poor material. Undoubtedly a fair proportion of these lads are capable of some improvement. Some of them can be taught to read and write and perhaps acquire some knowledge of a trade. They cannot be held responsible for their conduct, work or general advancement as are the other inmates. Their needs and exceptions are many and the course of reformatory treatment that is outlined for a fairly normal boy cannot be used for these unfortunates. At present the hope for these defectives depends upon the presence of an intelligent and humane staff in every corrective institution.

△ The court can make no exception for the mental defective; the bright and the stupid lad are both sent to the same institution. This method is simple for the court but complex for the school and no doubt a hindrance to its full usefulness. There is urgent need for a better classification and separation for the State's youthful offenders. To do the most for those who can be helped; to

separate the possibilities from the uncertainties; to provide suitably for these unfortunates is a duty that all the States must soon assume.

RECENT GYMNASTIC METHODS.

For some time past there has been a needed reform in the teaching of gymnastic exercises. In the colleges, Young Men's Christian Associations and other properly supervised gymnasiums the defects of the old systems have been recognized. New methods of training have been gradually superseding the use of heavy apparatus. Exercises necessitating great muscular effort have been abandoned, excepting in the preparation of certain professional athletes. In the place of these we find the "free hand" and the "setting up" exercises, all accomplished without the use of apparatus of any description. These simple movements are in many places accompanied by suitably timed music. This latter feature adds not only to the pleasure of the exercise but also increases the co-ordination of mind and body. Large, over-developed muscles and hypertrophied hearts are frequent results of old methods. In many instances more harm than good resulted from the training. The new method aims to produce gracefulness, ease of carriage and suppleness with moderate and uniform muscular development. No attempt is made to produce the highly trained athlete. The average citizen does not aspire to pugilistic or to high athletic honors. He desires sufficient knowledge of gymnastic exercises to insure the continuance of bodily vigor and future health. The series of free hand exercises as now taught can be easily mastered and practiced in after life with lasting benefit. Undoubtedly much harm has been done by too strenuous athletic work. When training has been discontinued the over-developed muscles soon regain their normal condition. This, however, is not the case with the hypertrophied cardiac muscle. Much of this remains as an ever-increasing menace to health. An example of this has been aired in the press recently in reference to the rejection of a noted athlete by the examining surgeons of the New York Police Department. This man shortly afterwards won the one thousand metre race at the Olympic games in London. The public could scarcely understand his rejection but the surgeons found in the enlarged heart sufficient cause.

At present the papers and magazines are filled with flaring claims of rival gymnastic schools and "professors." Much is promised that can not be accomplished and some of the claims are manifestly absurd. The wholesale advice of this type of gymnastic

instructors can not be too strongly condemned.

The ill-advised gymnastic work of the tuberculous patients needs checking. The gymnasium has but little place in the treatment of the tuberculous. Even mild breathing exercises had best be conducted only upon the direction of the physician for each particular case. The public should insist that a skilled physician be associated with every gymnasium as a frequent consultant and adviser.

"GAVE GANE."

During the past year rabies has been prevalent in many localities and a strict quarantine has been in force. Health reports have shown that there is a case of rabies in this country for every day in the year. In some countries the disease is even more widespread than here. In Russia it is quite frequently met with and many of the cases have their origin in wolf bites. In other European countries the so-called "chain and muzzle" law has produced excellent results. In Paris and Berlin these regulations have greatly reduced the number of cases.

Rabies is an infectious disease transmitted by a specific organism, and the disease may follow the bite of any warm-blooded animal. Lacerations from the teeth of pet dogs "that do not bite" are the usual cause. In a suspected case the dog's head should be at once sent to the Board of Health Laboratory for examination by expert pathologists. By recently developed methods considerable time can be saved for the patient and diagnosis usually given in a few hours. Formerly the pathologist relied chiefly upon the inoculation of laboratory animals. At present certain changes in the brain substance producing the so-called Negri bodies can be detected by microscopic examination, and these if found are practically pathognomonic. Much valuable time is thus saved and if necessary prophylactic treatment can be commenced. A few of the Health Boards and Laboratories have completed arrangements for sending the cord emulsion to physicians so that the patients may be treated at home. This plan will aid many who could not receive treatment at the institutions, and eliminate the excitement and expense of the journey. It is well to remember that the Pasteur treatment is but prophylactic and is of no assistance after the active symptoms of hydrophobia have appeared.

Recently some French investigators have produced a serum from the blood of immune animals that has a curative value, even after the disease has developed. This new serum has been tried extensively abroad

with excellent results. Without Pasteur's treatment or this more recent serum treatment, rabies is an invariably fatal disease.

The results of the prophylactic treatment are about the same wherever practiced. The mortality rate being less than one per cent. When we are reminded that ten per cent. of all people who are bitten by rabid animals develop hydrophobia and the untreated mortality rate is one hundred per cent., we can not overestimate the value of Pasteur's work.

We shall have the rabies so long as we come into daily contact with our domestic animals. The present dog tax and the much abused dog catcher can but slightly reduce the total number of canines. The proper disposal of the ownerless dog and the muzzling of the home animal will aid in the elimination of rabies. We must either submit to another such record in the future or prevent a repetition by enacting suitable legislation for its control.

THE VALUE OF THE TUBERCULIN TESTS.

The tuberculin tests of Calmette, Von Pirquet and Moro have been in use for more than a year, and frequent articles have appeared in relation to their efficiency. Most investigators have used the test described by Calmette. Others have used Von Pirquet's and some have tried Moro's. There appears to be little, if any difference in the value of the first two methods. The difficulty with the Moro test is to secure certain absorption of the tuberculin. Considerable effort is necessary to obtain absorption through the unbroken skin. Furthermore, there is no way by which we can be sure that there has been absorption of the tuberculin. A negative result may easily be caused by defective technique and the value of the test as a diagnostic agent destroyed. While the same is true to some degree in the other methods, yet the possibilities of error are much diminished by the ease with which absorption can take place. The reaction, if marked, is easily recognized in them all. However, in the ocular reactions the result may be quite fleeting and may escape frequently the notice of the physician. This is not the case with the other reactions, as the result is usually well marked and remains in an active visible state for from twelve to seventy-two hours. Furthermore, a positive reaction leaves a slight pigmentation of the skin that is visible for weeks. For the practitioner who is unable to see his patient often, the test according to the method of Von Pirquet is probably most suitable. The technique of these tests is simple and with care no injurious results are experienced. It is, however, essential

that a normal eye be used for the ocular reaction; serious difficulty may result from instillation into a diseased eye. The diagnostic value of these tests is still under discussion. Practically all observers admit that it is present in a large percentage of all tuberculous lesions, excepting in the advanced and moribund cases. It is also present in some instances in typhoid fever, acute articular rheumatism and influenza. The reaction in these diseases is not fully understood, but this in no way detracts from its value as a diagnostic agent in suspected tuberculous conditions. The absence of a reaction can not be held to positively exclude tuberculosis. It is probable that these tuberculin tests will ultimately be as valuable to the physician as the Widal reaction is at present. The test is unnecessary if a diagnosis can be made by the usual physical signs and it cannot replace a careful physical examination.

TRI-STATE SOCIETY.

It is to be said of the eleventh annual meeting of the Tri-State Medical Association of the Carolinas and Virginia, held in Charleston, S. C., Feb. 16-19, 1909, was a very successful meeting from every standpoint. Almost invariably it is said of such meetings that "it was the best in the whole history of the Society." Sometimes this is entirely true. But the Charleston meeting was indeed most interesting and enthusiastic. It was a genuine pleasure to visit the old historic city by the sea and to enjoy the hospitality which is a heritage of many generations of princely Southern entertainers.

The Committee on Arrangements, of which Dr. A. E. Baker was chairman, undoubtedly surpassed themselves in their efforts to guarantee the general comfort, pleasure and entertainment of every visitor present.

The attendance was quite up to the average, touching close to the two hundred mark, and this number included many visiting doctors from distant places. Some of the most prominent physicians in America were guests of the Association and their presence added greatly to the interest of the meeting. Among these may be mentioned Drs. Chas. H. Mayo and L. B. Wilson, of Rochester, Minn.; Drs. Wharton Sinkler and Chas. P. Noble, of Philadelphia; Dr. Homer Gibney, of New York; and Dr. T. R. Boggs, of Baltimore. These gentlemen brought to the attention of the Society much that was of the greatest value in the way of papers, demonstrations and discussions. And while we are ready to concede the great benefits which their ideas bring to our very doors, yet we are constrained to believe that many of our own doctors, from North and South Carolina and Virginia, were able to, and did,

present papers just as good, and that their discussions showed just as deep and broad a knowledge of things medical. The Journal is a great believer in what might be called *home talent*. Southern men yearly are giving evidence of increasing powers in investigation and original research. Indeed there are enrolled among those composing the roster of the Tri-State Society many names known to fame. But leaving out all consideration of these facts it is broadening and healthful for our doctors, bound as they are already by so many common ties, to get together and exchange ideas on scientific subjects and thus incidentally learn to know each other better. The Tri-State Society is a great educational organization and certainly a very valuable one socially. The papers read were intellectually above the average and the discussions showed a keen appreciation of the subjects presented.

The gentlemen who will occupy the executive offices of the association during this year were chosen because of their special fitness and eminent qualifications. No mistake was made in their election. They will honor the high office to which their fellows have elevated them. Their names, given below, need no further enunciation. They are well known throughout all three States. We are particularly pleased to note that no change was made in the office of Secretary. The present incumbent has abundantly demonstrated his splendid abilities in carrying on the important clerical duties of the Association. Since his term of office begun the Society has flourished, both in membership and enthusiasm. Himself a man overflowing with energy and zeal, Dr. Way indelibly impresses his personality upon whatever gathering he may attend.

Richmond, the next meeting place, will prove a drawing card. Easily the medical centre of the three States, accessible and possessing every facility for augmenting the interest of a medical Society meeting, a large attendance is assured.

Below we append a synopsis of the minutes of the Charleston meeting. In the list of papers we include only those which were read before the Society.

The Association was called to order on the morning of the 16th of February, in New England Hall, Charleston Hotel, Charleston, South Carolina, by Dr. A. E. Baker, of Charleston, Chairman of the Local Committee of Arrangements.

Prayer by Rev. Wm. Way, Rector Grace Episcopal Church, Charleston.

Hon. R. B. Rhett, Mayor of Charleston, being introduced by Dr. Baker, delivered the address of welcome on behalf of the city of Charleston. In his address Mayor Rhett gave many statistics, showing the splendid

condition, from a health standpoint, of the Southern States at the present time.

Dr. S. C. Baker, of Sumter, President of the South Carolina State Medical Society, delivered the address of welcome on behalf of his colleagues of the State.

Dr. J. F. Highsmith, of Fayetteville, President of the North Carolina State Medical Society, followed Dr. Baker, responding to the addresses of welcome on behalf of the physicians from North Carolina, and warmly thanked him and the South Carolina physicians for the splendid welcome extended the Association, as a whole, and particularly the delegation from his own State.

Dr. Stuart McGuire, President of the Virginia State Medical Society, responded to the address of welcome, on behalf of the State of Virginia and for the Association.

Dr. Baker read a letter from Dr. Dawson, President of the Medical Society of Charleston, inviting the members of the Association and their lady friends to visit the Roper Hospital and to attend a reception to be held there the same afternoon at five o'clock. This invitation was countersigned by Dr. Jervey, Secretary.

Dr. Baker also stated that at the close of the evening session, which would be about ten-thirty, a smoker would be held in the hotel in the two adjoining rooms; that the visiting ladies were invited to a tea at Mrs. Manning Simmons', 22 Rutledge Avenue, from five to seven, that afternoon; also that the ladies on the Entertainment Committee desired the visiting ladies to meet them in the hotel parlor at eleven o'clock the following morning, as it was their desire to take them driving over the city, and possibly to the navy yard.

Dr. Kollock announced that the Country Club and other clubs of the city desired to open their doors to the members of the Association, while in the city.

President's Address—"Longevity"—was then delivered by Dr. Albert Anderson, Raleigh, N. C.

The Annual Debate—"The Diagnosis and Treatment of Typhoid Fever"—was led by Dr. Edward C. Register, of Charlotte. The other two leaders, Drs. W. L. Robinson, of Danville, and J. H. Hamilton, of Union, were absent.

Dr. Register's paper, "Diet in Typhoid Fever," was followed by papers as follows: "Laboratory Diagnosis in Typhoid Fever," Dr. Thomas R. Boggs, of Baltimore, and "A Case of Spontaneous Rupture of the Spleen in Typhoid Fever, Extirpation, Death," Dr. Robert C. Bryan, of Richmond.

Those taking part in the debate were: Drs. Upshur, of Richmond; Weaver, of Asheville; Whittington, of Asheville; Wil-

liams, of Washington, D. C.; Allen, of Charlotte; Ben Johnson, of Richmond; Furman, of South Carolina; and Harnsberger, of Virginia.

Dr. Boggs announced that he would be glad to give a demonstration in his room to those interested in the typhoid fever symposium, of the carrying out of the tests.

Dr. Charles W. Kollock, of Charleston, brought in two little girls—sisters—and gave a little talk to the Association, demonstrating the title of his paper to be read later—"Report of Two Unusual Cases of Polypus in Sisters."

The President here read an invitation from the Charleston Lodge of Elks to the Association, inviting them to partake of the hospitality of their lodge rooms while in the city.

Paper by Dr. John N. Upshur, of Richmond,—“Neurasthenia.”

“Some Conditions Often Mistaken for Neurasthenia: The Essentially Different Treatment Required.” By Dr. Tom A. Williams, of Washington, D. C.

“Nervousness”—Dr. Robert S. Carroll, Asheville.

The foregoing three papers discussed by Drs. Long, of Greensboro, Noble and Sinkler, of Philadelphia, and Hodges, of Richmond.

TUESDAY AFTERNOON.

Convention called to order by the President.

Paper read by Dr. Wharton Sinkler, of Philadelphia,—“The Prognosis in Locomotor Ataxia.”

“The Rational Treatment of Tabes Dorsalis”—Dr. Tom A. Williams, of Washington, D. C.

“The Pathology of Goiter”—(Illustrated) Dr. L. B. Wilson, Rochester, Minn.

“The Surgical Treatment of Exophthalmic Goiter”—Dr. Charles H. Mayo, Rochester, Minn.

The two foregoing papers were discussed by Drs. Stuart McGuire, A. L. Gray, of Richmond; Williams, of Washington; Carroll, of Asheville; T. P. Whaley, of Charleston, and Weaver, of Asheville, and discussion closed by Drs. Wilson and Mayo.

“Dementia Præcox”—Dr. Paul V. Anderson, Morganton, N. C. Discussed by Drs. Carroll, of Asheville; Taylor, of Morganton; Williams, of Washington; Noble, of Philadelphia; and Hodges, of Richmond.

“Heredity: A Variety of Hypothetical Comments”—Dr. S. M. Crowell, Charlotte, N. C.

“What is Chronic Rheumatism?”—Dr. Ben. K. Hays, Oxford, N. C.

Latter paper discussed by Dr. Upshur, of Richmond.

Association here adjourned for supper.

TUESDAY EVENING.

Convention called to order by the President.

"Changes in the Articular Structures in Toxic Arthritis: Suggestions for Operative Treatment."—Dr. Michael Hoke, Atlanta.

"Gonorrhoeal Rheumatism with Special Reference to the Knee-Joint,"—Dr. William Moncre, Raleigh. Discussion by Drs. Hays, Coward, of Columbia, and closing by Dr. Hoke.

"Observations on the Treatment of Hip-Joint Disease,"—Dr. Homer Gibney, New York. Discussed by Dr. Hoke, of Atlanta.

"Some of the Possibilities and Limitations of the X-rays as a Therapeutic Agent," (Illustrated)—Dr. A. L. Gray, Richmond, Va. Discussed by Doctors Whittington and Southgate Leigh.

"The Apparent Divorce of Modern Medicine and Surgery, and its Consequences,"—Dr. J. Allison Hodges, Richmond.

"The Gynecologist and the Surgeon not Entities,"—Dr. C. M. Strong, Charlotte, N. C.

"The Post-Hospital Management of a Surgical Patient,"—Dr. Stuart McGuire, Richmond, Va.

"Some of the Relations of Degeneracy to Medicine,"—Dr. Chas. P. Noble, Philadelphia, Pa.

The President announced that the Council would hold its meeting immediately after the evening recess was taken by the Society.

Association here took a recess until nine o'clock Wednesday morning.

WEDNESDAY MORNING.

Convention called to order by the President.

"The Growth and Development of Preventive Medicine,"—Dr. Arthur R. Guerdard, Flat Rock, N. C.

Telegram from Dr. Taylor, of Washington, N. C., expressing his regret at his inability to be present at the meeting, and expressing his best wishes for the success of the Convention.

Discussed by Drs. Noble, Hodges, King of Charlotte.

"What is Minor Surgery?"—Dr. Hubert A. Royster, Raleigh.

"A Plea for Conservative Surgery in Compound Comminuted Fractures of the Extremities, with Report of Illustrative Cases,"—Dr. J. F. Highsmith, Fayetteville, N. C. Discussed by Drs. Southgate Leigh, Furman and Royster.

"The Mortality of Appendicitis, Based on Five Hundred Consecutive Cases, with Two Deaths,"—Dr. LeGrand Guerry, Columbia.

"The Transverse Incision in Appendi-

citis,"—Dr. Southgate Leigh, Norfolk, Va.

Two papers on appendicitis discussed by Drs. Royster, Noble, Stuart McGuire, Long, of Greensboro, Ben Johnson, of Richmond, and Weaver, of Asheville.

The Vice-President from Virginia, Dr. Bryan, who was in the chair at the time, announced that the Executive Council would meet in an adjoining room at a quarter to twelve.

"Gastric Cancer: a Diagnostic View and its Importance,"—Dr. W. O. Nesbitt, Charlotte, N. C.

"Cancer of the Bowel in the Young, with Report of Case,"—Dr. J. Shelton Horsley, Richmond, Va.

Dr. Nesbitt's and Dr. Horsley's papers discussed by Drs. Leigh, Long, of Greensboro, Upshur, and C. M. Strong, of Charlotte, N. C.

"Carbuncle,"—Dr. J. G. Johnston, Chester, S. C.

"Mesenteric Thrombosis,"—Dr. Chas. T. Harper, Wilmington.

"Studies on the Surgical Anatomy of the Temporal Bone,"—Dr. H. O. Reik, Baltimore, Md. Discussed by Dr. Russell, of Charlotte.

"The Surgical Treatment of Facial Paralysis by Nerve Anastomosis: with Report of a Successful Case Operated on Eighteen Months after the Trauma Causing the Facial Paralysis,"—Dr. W. E. Driver, Norfolk.

"A Report of 2,133 Cases of Pulmonary Tuberculosis treated in the Asheville Climate from 1898 to January, 1907,"—Dr. James A. Burroughs, Asheville.

"Tuberculin Therapy,"—Dr. H. Bascom Weaver, Asheville. Discussed by Drs. Cotton, Archer, of Black Mountain, N. C., Russell, of Charlotte, and discussion closed by Drs. Burroughs and Weaver.

Association here took a recess until three o'clock.

WEDNESDAY AFTERNOON, FEB. 17.

Convention called to order by the President.

"Results of Open-Air Treatment of Bone Tuberculosis,"—Dr. Owen Smith, Asheville. Discussed by Drs. Allen, of Charlotte, Harry T. Marshall, of Charlottesville, Va.

"Personal Studies in the Microscopic Pathological Anatomy of the Salivary Glands of the Dog in Rabies, with Exhibition of Specimens,"—Dr. A. G. Hoen, Richmond, Va. Discussed by Dr. Shelton Horsley.

"Report of Eight Cases of Dysentery Due to Protozoa,"—Dr. Wm. Allen, Charlotte.

"Amoebic Dysentery,"—Dr. Harry T. Marshall, Charlottesville, Va.

"A Successful Operation for 'Tic Dououreux,'"—Dr. E. A. Baker, Charleston. Discussed by Drs. Bryan and Southgate

Leigh.

"Ectopic Gestation,"—Dr. Samuel Lile, Lynchburg, Va.

"Tubal Pregnancy, with Exhibition of Specimen,"—Dr. W. P. Whittington, Asheville, N. C.

The two foregoing papers discussed by Drs. Noble, Horsley, Royster and Weaver.

Dr. Royster's resolution read by Dr. Way, asking that the Annual Debate be abolished, because of the invariable absence of the leaders. Ordered laid on the table until 1910 session.

Dr. Way read report of the Executive Council. Officers elected for the ensuing year are as follows:

President, Dr. LeGrand Guerry, Columbia; Vice-President for South Carolina, Dr. J. W. Jervy; Vice-President for North Carolina, Dr. W. W. McKenzie, Salisbury; Vice-President for Virginia, Dr. Joseph A. White, Richmond; Secretary and Treasurer, Dr. J. Howell Way, Waynesville.

Place of meeting for 1910, Richmond, Va.

Time of meeting, as fixed by the Constitution, the second Tuesday in February.

Members of the Executive Council, for a two-year term, vice Dr. E. G. Williams, of Richmond, resigned, Dr. J. S. Ruffin, Danville, Va. For the three-year term, Dr. Robert C. Bryan, Richmond; for the three-year term from North Carolina, Dr. James A. Burroughs, of Asheville. Three-year term from South Carolina, Dr. Rolfe E. Hughes, of Laurens. For the one-year term from South Carolina, Dr. H. E. McConnell, of Chester.

Upon motion of Dr. Baker, the report of the Council was unanimously accepted.

The new President was then installed, being escorted to the chair by Drs. Royster and Baker—ex-presidents of the Tri-State.

The new President, in a few well-chosen words, accepted the duties of his office, and adjourned the convention *sine die*.

Upon motion of Dr. Whittington the Association extended its sincere thanks to "The State of South Carolina and to the good citizens of Charleston, for their splendid entertainment while in the city."

SEGREGATION OF HIGH SCHOOL PUPILS.

An article in a lay journal, the American Magazine, November, 1908, on "Helpless Youths and Useless Men," by a doctor of Medicine, opens the question of high school training for boys. It is a forceful article and full of truth but the reader was struck with the suggestions which this discussion emphasises, that if *boys* are so in need of viril training, which after all means thorough forceful and well balanced training, why are not the girls also in need of it?

In the same journal Professor Thomas of Chicago University is contributing some essays on the psychology of woman in which she is classed with savages. He imputes her lack of capacity to a lack of training both from a mental and physical point of view. Our doctor of Medicine in his description of the adolescent boy asserts he is a *savage* needing a carpenter shop, a gymnasium and a man's swimming pool. Now why do not the young girls need the same opportunities?

If the feminine teachers, as Dr. Howard says, are so thin and vapid as to require the boys to spend their substance on Launcelot and the Idyls of the King, why do not their young girls also suffer from it? The daughters as well as the sons of the "junkman?" the healthy full blooded young miss who must do manual labor as a housekeeper, and manual *labor* as a physiological mother, who should know the value of her muscles, the value of perfect elimination and the glory of competing with her husband in the future for the things that are worth while?

It does not seem as if complete segregation is necessary to get all the good things Dr. Howard wants for his boys, but if it be, what then is to become of the poor girls left to the New England old maids whom the doctor particularly deplors and describes as being shocked by the good English term "leg" and primly discountenancing a boy who appears "before ladies in a torn shirt."

Does he think it only worth while to put the boys alone in the hands of strong forceful instructors? He does admit that there are a few women that are not "sissys" in the profession of teaching (or is it Prof. Thomas? one of the gentlemen mentions it) and that there are a few strong men in the high schools. Why can they not get together and frankly plan a more rational course for both sexes? There is just as much to be desired in the way of improvement in the education of girls as of boys.

Any one engaged in practical work and attempting to take high school girl graduates into places requiring accurate and useful service will be apt to find just such disappointing types as Dr. Howard describes among his boys. While there is a difference in the psychology to some degree of the adolescent boy and girl, there is the same need of a strong hand in stimulating to do that which is worth while, to think, to act and to put the proper emphasis on what is normal and worthy of accomplishment. If either boy or girl is over-sexed, harm is done.

If girls are permitted to sit indoors in fine

clothes and boys given the savage fling alone in the open, how are they to understand each other, or agree upon a standard of values when they do come together, as they are bound to do later in life?

Oh, yes! We agree with Dr. Howard—let the virile man take a hand in the education of his sons—but let's have some forceful and vigorous training for his daughters also. Do not let us forget that they are to be the future mothers, and motherhood takes more than poetry—though a *little* poetry might not come amiss, even if the sons and daughters are from the junkman's family. A reasonable amount, let us say—and put the emphasis on the *doing* of real things for the preparation of real life.

The education of both sexes in their youth on problems of sex is a subject which the present generation is beginning to take up seriously. It is hardly fair to heap such scorn as the clever Dr. H. does on the faithful and earnest New England spinster, when she fails to possess a clear and comprehensive view of it. How many of the worthy doctor's male acquaintances, we would like to ask him, have a fair grasp of the matter, and what do they teach their sons in regard to the subject in the boys school? Has the average man in the past had the sex problem well in hand to teach his son properly?

We think if the doctor will answer that question honestly, he will say, "No, the average man has not," and that even the medical profession has been blind to the full meaning, having but in recent years begun to realize the effect upon the race of transgressions upon the high moral standard of sex purity.

One cannot teach a thing well without full knowledge. Against the feminine prude as an extreme example of the undesirable teacher for boys, on the one hand, we might place the careless virile male instructor, on the other who has no clear-cut ideals of sex purity and who lacks the medical knowledge to convince him of the consequences in disease and degeneracy following transgressions. We do not want extremes, of course, we want something saner and safer, but let us have it for *both* our boys and girls, and segregation alone will not remedy the situation.

OPIMUM IN THE UNITED STATES.

It will be doubtless be to some a statement somewhat astounding when we say that last year no less than 150,000 pounds of smoking opium were imported into the United States. And the fact is doubly astonishing when we realize that our Chinese population, originally small, has either remained stationary or has decreased. The

amount is again significant when we realize that of crude opium imported for medicinal purposes about 7,000 pounds would supply the country's legitimate need.

It was therefore a somewhat ludicrous situation, so far as the United States was concerned, when it suggested the international Anti-Opium Congress which met in Shanghai, China, during the first days of January. As one writer has suggested: while attempting to remove the mote from its brother's eye it failed to see the mote in its own. Few indeed realize the extent of the opium evil in America. We are aware of the existence of no accurate statistics as to the manner in which most of the opium is used. Perhaps most of it is smoked, since Wright, the only resident member of the Commission from this country to the Congress mentioned above, discovered how great a quantity is legally imported every year, viz: 150,000 pounds of smoking opium alone. On the question of the use of opium, non-medically, all men are agreed. There may be differences of opinion as to whether whiskey as a beverage is legitimate, but there is only unanimity concerning the habitual use of opium. It is universally condemned. Doctors perhaps see more of the terrible results produced in morphine habitues than do other people, but after all they are ignorant as to the slaves of the smoking habit. Doubtless the latter is but little practiced in this section of our country—in the South we have the cocaine fiend to face—but in the great cities the habitues of the narcotic essence of the poppy are numbered by tens of thousands.

It is to be hoped that Congress will pass a law regulating the importation of opium for smoking purposes. Yet so far as the doctor is concerned—in his professional capacity at least—this is a matter of small importance. There can be no doubt but that opium has been, and is, both a blessing and a terrible curse. It is not easy to see how the medical profession could get along without it. When legislative bodies begin to attempt regulation by law of what physicians may give their patients and how they may give it, right then the doctor has lost his vocation. It is therefore difficult to see just how it is possible to draft laws to regulate the opium trade without imposing a serious hardship on a great class of citizens who, perhaps, after all is said, are most concerned.

MERCURY IN TUBERCULOSIS.

Medical periodicals have recently given much space to the newly advanced belief on the part of certain authorities in the efficacy of mercury in the treatment of tu-

berculosis. Perhaps the most prominent of those who advocate the use of this drug in tuberculosis is Wright who, in both the April number of the *United States Naval Medical Bulletin* and in the *New York Medical Journal* of August 29, '08, gave expression to his firm belief that mercury is a most valuable therapeutic agent, if not indeed a specific, in this dread disease.

In the November 28, '08 issue of the *Journal American Medical Association* the above named writer adds interesting data to his former papers. He believes that mercury acts in two ways: First, as a tonic, increasing the vitality of the cellular elements of the organs and tissues, and, second, in rendering the blood bactericidal, producing an antitoxin therein, which has a direct destructive action on the tubercle bacillus. He claims that the action of mercury is cumulative and lasting, and that the immunity conferred by the early doses, plus the resistance to the disease developed by the increased cellular vitality, places the patient in such condition that as treatment is continued smaller doses of mercury are required to obtain the desired results. A continuation of the dose on which the patient first showed improvement results in, first, a rise of temperature, and, second, a gradual loss of weight. Serious damage may be done if these signs be ignored and the result will be permanent damage to the patient if not rapid decline in health. The harmful effects include active general cellular degeneration of the tissues and blood. Close observation of each patient is necessary in order to determine the proper dosage, both for the original and succeeding amounts. It should never be pushed to the point of salivation. As a matter of routine Wright recommends the following method: Hydrargyrum succinimidum in doses of one-fifth of a grain is administered hypodermically every other day until thirty doses have been given. Injections are then discontinued and potassium iodide is prescribed in doses of three to ten grains given, well deluded, one hour after each meal. This is continued for two weeks and then all medication is stopped for one week. Injections of mercury are then resumed for another series of thirty, one dose being given every other day as before except that one-fifth of a grain and one-tenth of a grain are given alternately. Potassium iodide is then given for another two weeks, followed by a week of rest, when the succinimide is again in hypodermic doses of one-tenth of a grain every other day for thirty injections. By this experience will direct further dosage. It is said that the initial injection will, at times, produce a slight febrile reaction,

after which the temperature should fall to what it was before the injection was administered.

Whatever may be the outcome of this new method of treatment it behooves us not to express skepticism too forcibly at this early stage. It would appear that the position of Wright in regard to the similarity of tuberculosis and syphilis is worth consideration in many ways. We give mercury in syphilis knowing that it acts as a specific, but without knowing how or why. It may be that with proper dosage similar results will be obtained in the treatment of tuberculosis. Anything not harmful and which offers any chance of cure to sufferers from so dreadful a disease is legitimate and worth the trial. We await with interest further reports on the method as advocated by Wright.

CHANGES AT THE NEW ORLEANS CHARITY HOSPITAL.

Dr. Joseph A. Danna, formerly first assistant house surgeon, has been appointed chief house surgeon of the Charity Hospital, New Orleans, to succeed Dr. J. M. Batchelor, who recently resigned. Dr. S. W. Stafford was advanced from his former, position of second assistant, to first assistant house surgeon, and Dr. Christian G. Cole was made second assistant surgeon. The reports of officers and committees, in addition to interesting statistics which show the exceedingly flourishing condition of the hospital affairs, set forth the pressing needs of the institution. The reports from the various departments give evidence of the enormous amount of work this hospital is doing.

For the year ending January 1, 1909 a total of 10,278 patients were treated in the twelve months. Of these 8,103 were discharged cured, improved or stationary, and 1,393 died; giving us a gross death rate of 13 per cent. 794 of the deaths, or 57 per cent. were the result of such incurable conditions as tuberculosis to the number of 269, organic heart disease 116, Bright's disease 205, and poisons, accidents or violence, 404. The number of patients remaining at the end of the year was 782. The daily average was 791.

"In the outdoor clinics 18,757 new patients applied for treatment, of whom 12,901 were men and boys, and 5,856 were women and children. A total of 78,611 consultations were given. Thus a total of over 29,000 patients received treatment in this institution. In addition to this 7,433 accident and emergency cases were treated in the A. B. Miles surgical amphitheatre.

This is truly a wonderful showing for a Southern hospital.

Editorial News Items.

Doctor is Asked for Damages.

A lawsuit has been instituted in the Tennessee courts at Chattanooga, by Ambrose Kennedy, plaintiff, against Dr. K. D. Davis, a physician, and Dr. J. B. Lee, a druggist, both of Chattanooga. The sum asked for as damages is \$20,000. The plaintiff alleges malpractice on the part of the defendants, who were employed to attend and furnish medicines to his wife, who is said to have been suffering from a complication of diseases. The specific charges have not been made known.

Chattanooga and Hamilton County Medical Society.

At a regular meeting of the Chattanooga and Hamilton County Medical society held recently in Chattanooga, Tenn., Dr. R. M. Murphy, of Rome, Ga., read, by special request, a most interesting and instructive paper entitled "Surgical Conscience." Among the physicians that took part in the discussion were the following: Drs. Woolford, Duncan, Rathmell, E. B. Anderson, F. T. Smith, Wise, Atlee, Macquillan, Gee, Berlin, T. E. Abernathy, McWhorter, Wert, West and Wallace.

Dr. M. L. Parler, formerly of Wedgefield, S. C., has removed to Manning, S. C., where he is now engaged in the practice of medicine.

Atlanta College of Physicians and Surgeons.

The faculty of the Atlanta College of Physicians and Surgeons has recently adopted a new plan of management of the business affairs of the school, the marked growth of which has rendered this side of the work too burdensome to be borne by the various members of the faculty among whom has hitherto been divided. It was decided to employ a competent business man who should be secretary of the faculty, and who therefore should have charge of all business affairs, and who should attend to all the clerical work incident to the management of a modern medical college. To fill this position Mr. Lawrence Everhardt, formerly chief clerk of the passenger department of the Western & Atlantic Railroad, has been chosen. He will conduct the registration of students and in all their business dealings with the college the students will deal with him. Dr. W. S. Elkin, of Atlanta, is dean of the faculty.

Dr. Chas. H. C. Mills, one of Charlotte's foremost doctors, announced, on Feb. 1st,

1909, that he will limit his practice to Gynecology and Obstetrics. Dr. Mills is qualified by experience and fitness to engage in these important special lines of work. He occupies a handsome suite of offices in the new Realty Building.

Dr. Batchelor is Honored.

Dr. J. M. Batchelor, who for the past five years has been house surgeon of the Charity Hospital, New Orleans, retired in January from that office. His retirement was attended by many evidences of high esteem on the part of those connected with the hospital. Dr. Batchelor's connection with the Charity Hospital began in 1893, as externe. In 1894 he became resident student. Following his graduation in 1895 he was in 1896 appointed second assistant house surgeon in which capacity he served until 1902 when he became first assistant house surgeon. In 1903 he was appointed house surgeon. He is said to be the only individual who has served the hospital in every capacity from externe up. Dr. Batchelor has resumed active practice in the city of New Orleans.

Dr. H. F. Wilson of Chatham county, has moved to Durham, N. C., where he will practice his profession.

The Chester County Medical Society met in Chester, S. C., on Jan. 4th. The principal business being the election of officers, which resulted as follows: President, Dr. J. G. Johnson; Vice-President, Dr. D. A. Coleman of Blacksburg; Secretary and Treasurer, Dr. W. B. Cox; Censors, Drs. C. B. McKeown of Fort Lawn, S. C., H. E. McConnell, and R. L. Douglas, of Rodman.

After the meeting closed the body adjourned to Mitchell Hotel, where they were entertained at dinner by the outgoing President, Dr. W. DeK. Wylie of Richburg, S. C.

The Fourth District Medical Society of S. C. met in Columbus, Ga., on Feb. 16, in semi-annual session. Dr. M. M. Hallum, of Carrollton, was elected president.

The Atlanta Medical Library Association held its first meeting in its new quarters on Feb. 26th. The following officers were elected: President, Dr. M. Hoke; Vice-President, Dr. L. M. Gaines; Secretary and Treasurer, Dr. George M. Niles.

The Association has recently fitted up a nice comfortable reading room in the basement of the Carnegie Library of Atlanta, Ga.

The Horry County Medical Society of S. C. met in the office of Dr. J. S. Dusenbury, at

Conway, on Jan. 14th. Interesting clinical cases were reported by Drs. Dusenbury, A. D. Lewis, and J. K. Stalvey, which were freely discussed. Dr. J. A. Norton read the first of a series of papers on the subject of "The Code of Medical Ethics."

Drs. H. T. Kirby of Loris, and W. E. McCord, of Conway, made application for membership.

The York County Medical Association of S. C. met in Yorkville, on Jan. 4th. After hearing reports, reading papers, and transacting the business of the society, the members went to the Shandon Hotel, where a most delightful banquet was given by the proprietor, Mr. J. Ed. Sadler.

Railroad Surgeons Meet.

The second annual convention of the joint association of surgeons of the Illinois Central, Yazoo and Mississippi Valley and Indianapolis Southern railroads met in Memphis, Tenn., on Feb. 25th, and 26th. Various subjects were discussed, and the meeting was of great interest from every standpoint.

Tuberculosis Sanatorium.

Announcement is made of a reorganization of the Tuberculosis Sanatorium at Ironville, Va. Dr. Walter F. Wood, late medical superintendent of the well known White Haven (Pa.) Sanatorium, is in charge and patients are now accepted from any State. No free patients are admitted but charges are based on cost, being \$30 to \$45 per month for all essentials, which places it within the reach of many middle-class patients who could not afford private sanatorium rates. The institution is favorably located in the Blue Ridge at an elevation of 1400 feet.

Rutherford County Medical Convention.

At the December meeting the Rutherford County Medical Society (N.C.) elected the following officers: President, Dr. T. B. Lovelace, of Henrietta, N. C.; Dr. E. B. Harris, Vice-President; Rutherfordton, N. C.; W. C. Bostic, Secretary and Treasurer; Forest City, N. C. The next meeting to be held in Rutherfordton Feb. 2nd, will be a special on Tuberculosis.

New Officers of Hospital.

At the last meeting of the Mary Washington Hospital Association, in Fredericksburg, Va., the following were elected, President, Mrs. John E. Mason; First Vice-President, Miss Virginia Knox; Second Vice-President, Mrs. W. H. Richards; Secretary, Mrs. D. C. Bowman; Corresponding Secretary, Miss Sallie N. Gravatt; Treasurer, Mrs. Maurice Hirsch.

Marriages.

Dr. Albert L. Bacon, of Albany, Ga., and Miss Lottie Tift of the same place were married Feb. 16, '09. Dr. Bacon is a prominent young physician of Albany.

Dr. Francis Monroe Martin of Shellman, Ga., and Miss Alma Hickey of Lumpkin, Ga., were married at the home of the bride's parents, on Jan. 28th.

Dr. David Randolph Phelps, of Lynchburg, Va., was recently married to Miss Florence Juliette Shumacher of College Park, Ga.

Deaths.

Dr. W. W. Lunn, a prominent physician of Houston, Texas, died at his home on February 25th. Blood poisoning, which he contracted while performing an operation, three weeks prior to this time, was the cause of his death. He graduated from the Medical Department of Tulane University of Louisiana, New Orleans, La., in 1884, from the New Orleans Polyclinic in 1889, and from the New York Polyclinic in 1893.

Dr. Theodore Simmons, of Simmonsville, Miss., died in Hotel Dieu, New Orleans, La., on February 22nd. He had been a sufferer for a long time, and his death was caused by a complication of heart and liver disease. He was taken to New Orleans a day or two before his death, for treatment, but died in a few hours after reaching the infirmary. Dr. Simmons was fifty-eight years old.

Dr. George L. Nye died Feb. 4th at his home in Hurricane, W. Va. Dr. Nye was a Confederate soldier, who at the close of the war, was surgeon of the Forty-fifth Virginian Regiment. He is survived by his wife and sons.

Dr. E. C. Cochran died at his home in Tunnel Hill, Ga., on Feb. 24th. He was one of the oldest, and one of the most beloved citizens of that place. Dr. Cochran was 85 years of age. He served as surgeon in the Confederate army, throughout the war. He has been practicing in Tunnel Hill for about forty years.

Dr. William C. Flagg, of Ruther Glen, Va., died at his home on the morning of Feb. 10th, after a brief illness. He was fifty-four years of age when he died.

Dr. Hugh M. Clendenin, one of the most eminent and popular physicians of Chattanooga, Tenn., died at his home, 3424 Third Ave., several days ago. Dr. Clendenin had

spent a strenuous week attending a patient with the same disease.

Dr. I. N. Donaldson died Feb. 22nd at his home, near Wadesville, Va., after a protracted illness. He was sixty-one years of age when he died.

Dr. B. M. Buckner, a prominent physician of Madison county, Va., died at his home, Feb. 22nd, aged 75 years.

Dr. E. L. Patterson, of Barnwell, S. C., died in St. Luke's Hospital, New York City, on Jan. 23rd. Dr. Patterson was one of the most dearly beloved men of Barnwell, and his death was a great surprise, also and also a source of great sorrow to his friends throughout the State. He had been in bad health for some time, and had gone to New York to consult a specialist about his condition. After examination it was found that an operation was necessary. The operation was performed on the 14th of Jan., from which he never revived.

Dr. Patterson was a member of the State Medical Association, and also a member of the Aiken and the Barnwell County Medical Societies, having served as President of both of these. He had been a very successful practitioner in Barnwell for 20 years.

Dr. William Buckingham Armstrong, a very successful physician of Atlanta, Ga., died at his home there at 246 Washington St., several days ago. Pneumonia was the cause of his death. He was only 35 years of age, and the possibilities of his success were cut short by his early death. Dr. Armstrong graduated from the Columbia University, New York, in 1899. Soon after that time he began practicing medicine in Atlanta.

Dr. Armstrong was associate professor of anatomy at the College of Physicians and Surgeons, Atlanta, Ga., and was visiting surgeon at the Grady, Wesley Memorial and Presbyterian Hospitals. He was a member of the city board of health and of the Grand Park commission.

Dr. A. F. Sherman died at his home, on Jefferson Street, East Chattanooga, Tenn., several days ago. He had been ill for quite a long time.

Dr. Sherman was a native of Michigan, but moved to Chattanooga in 1883, and resided there until the time of his death. He graduated from the Chattanooga Medical College in 1898.

Dr. Alexander Smith, an eminent physician of Lexington, Ala., died at his home on Feb. 17th, aged 67 years.

Dr. Smith was engaged in the drug busi-

ness in Florence, Ala., for about twenty years. For the past twelve years he has been practicing medicine in Lexington. Dr. Smith was a Confederate soldier, and served with distinction all through the war.

Dr. Smith Gordon, of Alexandria, La., aged seventy-five years, died at his home several days ago. He was a prominent practitioner of that section of the country for about forty years, but on account of his age, and ill-health, he was compelled to give up this work a few years ago.

During the Civil War he was captain of the Ninth Regiment of Louisiana Volunteers, which did service in Virginia.

Dr. R. Fuller Gaskins, a retired physician, died at his home 709 Virginia Ave., Barton Heights, Va., several days ago. Dr. Gaskins was sixty-two years old when he died. He was well known in military circles during the war.

Dr. John J. Ensor, a pioneer physician, of Bristol, Tenn., died at his home on Feb. 12th.

He was a native of Carter county, Tenn., and was educated at Washington College, Tenn. Dr. Ensor was eighty-four old, and it was the fifty-seventh anniversary of his wedding with Miss Amanda Anderson, when he died.

Dr. Alexander F. Wills died at his home in Clifford, Va., on Feb. 4th. He was one of the most prominent physicians of his community, and was highly esteemed by all who knew him. At the time of his death he was physician to the county almshouse. He was seventy-six years of age when he died.

Dr. Willis graduated from the Jefferson Medical College, Philadelphia, Pa., in 1856.

Dr. W. F. Chenault, a well known physician of Cleveland, Rowan county, N. C., died at his home in that place on Feb. 24th. Paralysis was the cause of his death. He was forty-seven years old. He had a large practice in that section of the State, and has many friends who will regret to hear of his death.

Dr. Chenault graduated from the University of Maryland School of Medicine, Baltimore, Md., in 1888.

Dr. W. M. C. Westmoreland, a prominent physician of Cuthbert, Ga., died at his home on Jan. 27th. He was one of Cuthbert's oldest citizens.

Dr. William F. Wilson died at his home near Rugby, Tenn., several days ago, aged about 65 years. Dr. Wilson was from a

very prominent English family, his father having been a bishop of the Church of England.

He was a graduate from the London Medical College, and had practiced in that city several years, before coming to America.

Dr. R. J. Trippe, one of the best known and most prominent physicians of Cartersville, Ga., died in an Atlanta hospital several days ago. Cellulitis, which was the result of an injury sustained on his arm several days before, was the cause of his death.

Dr. Trippe was once a Chattanooga, Tenn., physician, but had to give up his practice there on account of his health. He moved to Cartersville about twelve years ago, and since that time has been a prominent practitioner of that place.

Dr. John McArden Johnstone, one of the oldest physicians of Savannah, Ga., died at his home on Feb. 14th. He was in his eightieth year when the end came. Dr. Johnstone was a surgeon in the Confederate army, and established hospitals at Guyton, Macon, Augusta and Savannah, Ga.

Dr. L. S. Anderson, of Moss Point, Miss., died on Jan. 25th, while on a business trip in Managua, Nicaragua. He was a son of Dr. Lomax Anderson, of Jackson, Miss., and was known throughout that State.

Dr. Anderson was graduated from the Regents of the University of New York State, Albany, N. Y., in 1893.

Dr. J. H. Donald, one of the most prominent physicians of South Carolina, died at his home in Piedmont on January 22nd. Paralysis was the cause of his death. He was 56 years old. He was a son of the late Dr. J. F. Donald.

Dr. Donald graduated from the Charleston Medical College in 1875, and had been living and practicing in Piedmont since that time.

Review of Southern Medical Literature

The Southern Practitioner, January, 1909

Benign Tumors of the Breast and their Treatment.—Dr. J. B. Murfree says that in view of the fact that we cannot always be sure of the innocent nature of the tumor, especially as the statistics show that 83 per cent. of all tumors of the breast are malignant, and also that benign tumors of the breast are prone to undergo degeneration, the true principle for the treatment of benign tumors is excision. While possibly a

benign tumor in the breast may continue through life and produce no especial inconvenience, yet the safe side is to remove it. The treatment of benign tumors of the breast, therefore, as a rule, is operative.

When the tumor is small, not attached to the surrounding tissues, but easily movable and not inflamed, a long incision should be made in the direction of the acini, the tumor enucleated always when practicable, leaving the nipple untouched. But if the tumor is located deep amidst the acini, is adherent, inflamed or ulcerated, the whole breast must be removed, together with any neighboring glands that may be enlarged.

In conclusion, he would emphasize the statement that the true principle of the treatment of benign tumors of the breast is to excise the tumor, and if necessary to amputate the whole breast. The operative treatment is justifiable, is conservative, and is life-saving.

Codeine.—Dr. W. F. Waugh points out that as a reliever of pain, morphine is superior in strength and in efficacy. As a hypnotic morphine excels whenever actual pain is the cause of the inability to sleep. In all other cases, when the cause of insomnia is something milder, like worry, or that nervous erethism that comes from mental overwork, codeine is preferable. It is also to be selected whenever it will answer, on the principle that we should always employ by preference the milder and safer remedy.

In pneumo-gastric irritations, codeine is the more effective, hence it should altogether replace morphine in the treatment of cough, and of disorders of the stomach and bowels. Codeine allays irritated intestinal peristalsis without completely paralyzing it, and does not check mucous secretions as does morphine; and this is its greatest value; for this means that we do not have the excretion of toxins arrested and these bodies thrown back into the cells to such an extent as with morphine. Hence the quieter slumber and pleasanter sensations on awakening, reported by the French and Italian clinicians.

New Orleans Medical and Surgical Journal, January, 1909.

Malarial Blindness.—Dr. T. S. Davis thus itemizes the following general conclusions:

The estivo autumnal parasite is the one which produces malarial blindness, and its tertian form is the one most frequently present. It is not necessary for the malarial cachexia to exist for the blindness to occur.

The blindness may be transient and disappear as the fever goes down or it may be

come permanent through atrophy of the optic nerve. The blindness may be produced by either an optic neuritis, retinal hemorrhage, hemorrhage into the vitreous, effusion into the vitreous or by a retino choroiditis.

The diagnosis is rapidly made by blood examination and by the ophthalmoscope.

It is readily differentiated from quinin amaurosis by the fact that in the latter there is grave ischemia while in the malarial affection there is great congestion of the papilla. The prognosis is good and quinin is best given by needle.

Some Diseases of the Human Race Carried or Transmitted by Insects.—Dr. McBrady believes that the following named insects, and probably others, are known to spread infection by one of these methods: Mosquitoes, biting flies, house flies, ticks of various species, bed-bugs, lice and roaches. The proven diseases so conveyed are already numerous and those under suspicion are continually growing. They are the various types of malaria, yellow fever, dengue and filariasis, with its lymphatic and other complications; human trypanosomiasis, or sleeping sickness; kalar azar; plague; Malta fever; relapsing fever; Rocky Mountain fever and other tick fevers of Asia and Africa; the Japanese river fever; miliary fever or Sweating Sickness of Picardy; cholera (by roaches), as in Manila; yaws or frambesia; beri-beri; typhus and probably leprosy; not to mention five or six obscure fevers of the tropics, such as the chitral fever of North India and the seven-day fever of the seaports.

The mosquito has been well called the king of the insect world and it has been said that while other insects annually destroy value in lumber, cotton, grain and fruit to the amount of \$800,000,000, the mosquito each year destroys far greater value in health, life and commerce.

The mosquito drove the Spanish from the New World, caused the failure of the French attempt to connect the Atlantic and Pacific oceans and almost made non-combatants of the Fifth Army Corps at Santiago during the Hispano-American war, and had it not been for the prompt surrender of the Spanish army, would have cost the lives and health of hundreds of thousands of Americans, already practically made non-combatants by the same cause.

Virginia Medical Semi-Monthly, Jan. 8th, 1909.

Surgical Tuberculosis with Especial Reference to the Use of Tuberculin in Diagnosis and Treatment.—Dr. R. T. Taylor concludes this paper as follows:

1. The X-ray is by all odds the best aid to the clinical diagnosis of tubercular bone disease.

2. The subcutaneous injection of large doses of tuberculin (one to five milligrams) in children, is to be condemned for diagnosis as unnecessary with the other means at our disposal, because harmful and possibly dangerous. Syphilis and leprosy also respond to these large doses.

3. Conjunctival or ophthalmotuberculin may cause corneal ulcers and serious eye inflammations in two per cent. of the cases and is, therefore, not to be used from choice.

4. The Von Pirquet skin resection is quite reliable, safe and valuable, especially in conjunction with the clinical symptoms and the X-ray in children.

5. Tuberculin T. R. in doses of from 1-1000 to 1-500 mgm. and the fresh air treatment should be used as a routine in all tubercular bone and joint cases in an endeavor to immunize the patient.

6. Thorough fixation traction in all acute cases, and in the spine, hyperextension in addition, are of the greatest importance treating the local disease.

7. Bier's hyperemia and Beck's bismuth paste are valuable additions and adjuvants to treatment.

8. Tuberculous secondary abscesses should not be opened unless there is some decided reason therefor, and, if opened, should be immediately sutured tight after the pus is evacuated. Otherwise, a secondarily infected sinus will surely result with its train of unfavorable symptoms.

9. Operations on the tubercular joints of children should be avoided if possible; not so with adults.

Diagnosis and Treatment of Pneumonia.—Dr. J. H. Dunkley says under the section on abortive treatment that Petresco has found large doses of digitalis administered at the onset would cut short the disease, but Anders says the cases in which he had adopted this plan had failed. The plan seems rational since its aims at meeting the chief pathogenic indications by passing through the lung tissue an adequate proportion of leukocytes, and thus re-establishing the cardio-pulmonary circulation. Tincture veratrum 2 to 5 minims every two hours is credited with the power of reducing the intensity and shortening the duration of the attack. The writer has used veratrum in a few robust cases, with regret in the majority of them.

Osler says pneumonia is a self-limited disease, which can neither be aborted nor cut short by any known means at our command. Yet, under the most unfavorable circumstances, it may terminate abruptly

and naturally without a dose of morphine. Also, under favoring circumstances of good nursing and careful diet, the experience of many physicians has shown that pneumonia runs its course in a definite time, terminating sometimes spontaneously on third or fifth day, or continuing until tenth or twelfth day.

There is no specific for pneumonia, and the author believes more patients are damaged than helped by the promiscuous drugging, which is still only too prevalent.

Diagnosis and Treatment of Tuberculosis of the Intestine.—Dr. W. L. Peples thus describes the operation of castration when indicated in these cases.

It is well to go high up the cord, even to the internal ring. The tunica vaginalis should always be removed with the testicle. The tunica vaginalis should not be opened prior to removal from the scrotum, especially if it contains much fluid, for this may be infectious. If the testicle and its tunica are together peeled from the scrotum as in the bottle operation for hydrocele, there will be not only less bleeding and trauma, but it can be much more quickly accomplished. This will also permit the opening of the tunica vaginalis outside the scrotum without fear of contamination, if it is thought wise to inspect the testicle with a view to possible conservation, or to make certain the diagnosis. When the testicle is honey-combed with abscesses, or is a soft, boggy mass, it is best to go first to the internal ring, to isolate the cord, cut it between ligatures, and strip it out from above downward. This will minimize the possibility of dissemination from rough handling, which might force the infection into the open veins and lymphatics, if we work from below upward with the cord intact.

Richmond Journal of Practice, Nov., 1908.

The Value of the X-Ray in Chest Diagnosis.—Dr. A. L. Gray, Richmond, Va.

Maryland Medical Journal, January, 1908.

Public and Private Water Supplies in Maryland.—Dr. M. L. Price.

Texas Medical Journal, November, 1908.

Additional Provision for the Insane.—Dr. F. S. White, Terrell, Texas.

Gaillard's Southern Medicine, Dec., 1908.

On Some Modern Methods for the Clinical Examination of Urine Gastric Juices.

—Dr. C. F. Weiss says that apart from the possibility of experimental error, there are actual fallacies attendant upon the use of Fehling's solution. These are due to the

fact that other substances in the urine can reduce cupric oxide. The chief of these are uric acid, creatinine, hippuric acid, lactose, glycuronic and glycosuric acids, and certain drugs. There is only one absolutely certain test for glucose—i. e., the fermentation test, glucose being the only fermentable substance ever found in urine. Much attention has lately been paid the improvement of the various forms of saccharometer—i. e., instruments for estimating the amount of sugar by the fermentation method. The latest instrument of this kind, which will be found to fulfill every requirement in practice, is a graduated U-tube in which evolution of carbon dioxide by fermentation causes displacement of a column of mercury. It is possible to register the sugar contents in twentieths per cent. up to 1.5 per cent. and thence in halves per cent. to 10 per cent. The instrument is cheap, simple and effective, and will doubtless supersede all other forms of saccharometer.

Mobile Medical and Surgical Journal, Jan., 1909.

Some Problems in Medicine which Affect the Prosperity of the South.—Dr.

S. Harris points out that in the earlier years of this Republic, and even in the first few decades of the last century, malaria was prevalent in the Southern States to an extent that greatly interfered with their material development. At that time quinine was such a rare and expensive drug it could not be obtained, particularly in the rural districts, and nothing was known as to the nature and cause of the disease, so that thousands died from malignant types of malaria.

The first capital of Alabama, St. Stephens, which was, at one time, in 1810, a thriving town of several thousand people, was literally wiped off of the earth, because malaria was so prevalent and of such severe type that its inhabitants either died or abandoned their homes. With our present knowledge of malaria, the inhabitants of old St. Stephens could live in perfect health without one of them having a symptom of the disease which a century ago destroyed their prosperous little city.

Conservation of Energy and Multiple Operations in Surgical Work.—Dr. R. R.

Kime says that we are also learning from a physiological surgery that nature frequently overcomes germ invasion and cares for large accumulations of pus in the abdominal cavity, if tension is relieved and free exit given, and vital forces sustained by medicinal and physiological means. It is here the edict of Morris "get in quick, get out quicker," is golden if you desire to conserve vital powers and save life of your

patient. At other times more complete work, or even multiple operations are indicated.

In multiple operations the surgeon must classify his work with discrimination and good judgment after proper investigation, in order to conserve vital energy and not kill his patient.

Many a patient has been killed by trying to do complete surgery at the wrong time, by flushing, mopping and manipulating intra-abdomino-pelvic organs when nature could eliminate and do the work far better than the surgeon, if only tension is relieved and adequate drainage secured.

Gauze packing and dammiug is often the damming of the patient.

Acute Plastic Pericarditis.—Dr. J. V. Shoemaker gives the following treatment and prognosis:

After the diagnosis of pericarditis has been made our aim should be to avoid, if possible, the disease from merging into either sero-fibrinous or purulent pericarditis, which he believes can be done by the application of the ice bag over the heart and the thorough purgation with calomel and saline. This patient receives a calomel purgation every other day, followed by a mild saline.

In order that the blood will be distributed to the periphery of the body and thus prevent engorgement of the pulmonary circulation, grains 1-100 of spiritus glycerylis nitrates is given every four hours, and fluid extract of convallaria 10 drops with the other remedy to stimulate the heart's action. When the acute symptoms disappear we will give him ten grains of potassium four times daily to hasten absorption of inflammatory processes.

The diet in these patients should be composed of nutritious and digestible solids. Liquids are interdicted because of the possibility of overfilling the blood vessels.

As to life the prognosis is always good. The acute plastic form may merge into either the sero-fibrinous or purulent form or it may become chronic. The exudate may become connective tissue and form adhesions between the layers of the pericardial sac.

Richmond Journal of Practice, Dec., 1908.

A Consideration of Some Intestinal Diseases Due to Metazoan Parasites.—

Dr. E. G. Hopkins says that tape worms are peculiarly interesting on account of their complex biology. They all have a double life cycle. The mature segmented form inhabits the intestine of some animal, usually man. The eggs are produced while in this stage. These eggs have a hard resisting shell which is not soluble in the in-

testinal juices, but which is readily soluble in the gastric juice. When taken into the stomach of another animal, the shell of the egg is dissolved and the embryo is liberated. The embryo is possessed of three pairs of hooklets, one central and two lateral pairs. The central pair is for boring, the lateral for tearing and propulsion. By means of these, they make their way through the gastrointestinal walls and invade the muscles and other organs. Here, the embryo develops into a cyst from which the larval forms are produced.

Three varieties of tape worm habitually infest the intestine of man in their mature form. These are the taenia saginata, the taenia solium and the bothriocephalus latus; and according to the animal in which the larval or cysticercus form develops, these worms are commonly called beef tape worm, pork tape worm and fish tape worm. It is the larval that is infectious for man.

Alabama Medical Journal, January, 1909.

The Influence of Heredity Upon Tuberculosis.—Dr. A. Latham draws the following conclusions:

1. The hereditary transmission of the germ is so infrequent that it is a negligible factor.

2. The incidence of tuberculosis depends in the main on two factors—(a) exposure to infection, which in turn is governed by the dose received and the virulence of the particular strain of bacillus; and (b) the undermining of the resistance of the individual by insanitary conditions and by disease.

3. The more adequate the preventive measures taken in any community the less are the incidence and mortality of the disease.

4. The more adequate the medical treatment—that is, the greater the proportion of persons in whom the disease has been arrested and who have thereby acquired a partial immunity—the less are the incidence and mortality of the disease.

5. As at death we all, or nearly all, show evidence of having at some time been infected with tuberculosis, and as most of us are able to overcome the infection, it is clear that the diminished opportunity for repeated infection, brought about by preventive measures and better medical treatment in this country, can not wholly account for the diminishing incidence and mortality of the disease.

6. There is some evidence to suggest that the diminishing incidence and mortality of the disease may be in part due to a partial immunity inherited in the course of generations from tuberculous ancestors in whom the disease has been cured.

7. The theory that there is an inherited predisposition to tuberculosis is based on insufficient evidence.

The American Practitioner and News, Jan., 1909.

A Treatment of Burns.—Dr. J. M. Morris reports a case in which about 220 square inches of the skin was entirely destroyed leaving the flesh in a charred and exposed condition. This was all above the waist line including the arms. The child's body was bound with plain gauze saturated with carroll oil and was not removed for six days. On removal of dressings found the surface suppurating. Disinfected the surface with carbolic acid solution and removed all the narcotic tissue and redressed with carbolized vaseline. This continued for 3 weeks; at the end of this time a dusting powder of aristol boracic acid and bismuth was used and was soon followed by general suppuration resembling gangrene. The sloughing continued until the dressings was changed back to moist dressing, and from this on the case has improved rapidly showing in the author's mind the importance of the moist dressing in this class of burns namely, 2nd and 3rd degree burns.

Some Experiments with the "Copper-head"—Dr. E. S. Allen says that from his experiments with rats that the action of alcohol caused the rats to succumb earlier to the effects of the snake venom than did the rats that were bitten and injected and had no alcohol. Alcohol certainly did not have any antidotal properties, for, mixed with the venom before injecting the rats did not modify its toxicity, and rats saturated with whisky before and after being bitten did not seem to have the same amount of resistance as rats that had no whisky. Therefore whisky has no antagonistic properties, for the rat given whisky died earlier than did a like size rat with the same dose of venom without whisky. The peptone of the venom action on the vasomotor centers soon lowers tension and a starvation of the vasomotor constrictor apparatus result, then alcohol coming along with its secondary and lasting action has a tendency to still lower blood tension and that typical vascular paralytic picture of shock result.

The author believes that many a man has been killed with huge doses of whisky instead of dying as a result of snake venom, and the same rule will hold good in bacterial intoxication.

The Southern Medical Journal, Jan., 1909.

Retroperitoneal Tuberculous Glands

and Their Relation to Spinal Symptoms.

—Dr. C. F. Painter says that it has been pretty conclusively proven that the intestinal route is one frequently employed by the tubercle bacillus in gaining access to the human body. This organism may pass the stomach unchecked in its progress and make its way through the intestinal coats without producing any evidence in these structures of its passage. It has been shown that the mesenteric retroperitoneal as well as the bronchial glands may become infected in this manner. Clinical evidence of the enlargement of these glands may often be obtained. It has been demonstrated as a fact that they at times may lie so close to the front of the vertebral column that they may erode the bone and that in those cases symptoms were present pointing conclusively to the spine as the seat of a lesion. It is seemingly not necessary that the glands should actually erode the column in order to give rise to symptoms, because cases are on record where the glands were in evidence and spinal symptoms were present, though no sign of vertebral erosion could be obtained. In the course of the recovery of the case clinical evidence of the existence of glands disappeared and synchronously with the spinal symptoms could no longer be detected. Treatment is largely constitutional. Prognosis is in the main good.

The Virginia Medical Semi-Monthly, Jan., 22nd, 1909.

Typhoid Fever.—D. A. Burkholder believes that in the administration of drugs we consider the physiological action, the therapeutical action, and the toxic action; and we are very careful to carefully guard the latter action. Why should we be indifferent in regard to other substances that likewise have indirect toxic effect? Pathologically the gravest lesions exist in the bowel; we all admit that we are in the presence of gastro-intestinal catarrh with hyperplasia, and that irritating food increases peristalsis, which increases absorptions of toxins, and sepsis thus produced increases nitrogenous waste more rapidly than the typhoid toxin.

Therefore, let us regard these cases from a surgical standpoint, and treat them as we would any other lesion of the viscera—rest, perfect rest, not only of every vital organ, but bowel rest. This means that nothing within nor anything from without should disturb the patient; even the very atmosphere he breathes should carry nothing but oxygen. A quiet room and a nurse not afraid of work and possessing sufficient intelligence to realize that nursing consists

n attending to directions given by the physician, are essential.

Is Mercury a Specific in Infectious and Contagious Diseases, as well as in Syphilis.

—Dr. H. E. Jones says it seems to him that the rational specific treatment in the severe acute infectious and contagious diseases, would be to give a 30-grain dose of calomel, commencing the next day bichloride hypodermically, 1-16 to 1-8 grain twice a day, and 1-16 of a grain by mouth every two hours, continuing this treatment until the disease is controlled. If it is one of the more chronic forms of the disease, viz: tuberculosis, syphilis, leprosy, etc., give the above treatment for a few days or weeks, and then give the albumino-cholo-tannate for an indefinite time or as long as may be necessary. From his own experience and a wide clinical experience of noted men with bichloride, it establishes the principle of specific effects of this drug in this important group of diseases. Hence he feels justified in suggesting this line of treatment in all the above named diseases in which it has not been commonly used as a specific. The most timid doctor need not have any fear in giving this treatment. It will not do the patient any injury. Watch the effect, and as soon as gums swell and teeth become slightly tender, stop the drug for a few days. Resume it as soon as swelling and tenderness disappears.

Book Notices.

Disorders of the Bladder. Diagnosis and Treatment with Technique of Cystoscopy, by Follen Cabot, M. D., Professor Genito-Urinary Diseases, Post-Graduate Medical School and Hospital, New York. A manual of this phase of surgery supplementing the more pretentious volumes. 8 vo. 225 pages, 40 illustrations and 1 colored plate, cloth, prepaid, \$2.00 net. E. B. Treat & Co., Publishers, New York.

The Surgery of the Ear. By Samuel J. Kopetzky, M. D., Attending Otologist New York City Children's Hospitals and Schools and to the Red Cross Hospital; Assistant Surgeon and Instructor in Operative Surgery of the Ear, Manhattan Eye, Ear and Throat Hospital; Pathologist and Surgeon, New York Throat, Nose and Lung Hospital, etc., New York: Rebman Company. 1908. Cloth, \$4.

"This superbly illustrated volume of 368 pages is, as far as we know, the only work in the English language which is exclusively devoted to the surgery of the ear.

"The anatomy of the ear, together with

congenital malformations, the variations from normal adult conditions as found in young children and the surgical anatomy peculiar to each diseased condition are treated with great care and precision. The historical account of the various operations is also very interesting.

"Every surgical operation has its full and complete description, and all possible complications are carefully considered.

"It is doubtless true, as the author suggests, that the surgery of the ear will become a specialty, as distinguished from the general diseases of the ear, and this book is admirably adapted to such a condition.

"The author's large experience especially fits him for the task he has undertaken so successfully, and every practitioner of medicine should have the book, for it is to the general practitioner that these cases first present themselves."

The New Standard Formulary. Volume 1. Pharmaceutical Preparations. By A. Emil Hiss, Ph.G., and Albert E. Ebert, Ph.M., Ph.D., Chicago: G. P. Engelhard & Company, 1908. Price \$3.00.

"The 'Standard Formulary,' as originally compiled by Ebert, assisted by Hiss, has long been favorably known to the pharmacists of this country. Now the publishers have decided to enlarge the scope and to issue a collection of germane formulas in six volumes, of which the present is the first of the series, the work of revising, since the death of Mr. Ebert, being assumed by Mr. Hiss. Volume 1, as shown in the title, comprises the pharmaceutical, or so-called galenical, preparations. In effect, it is a universal pharmacopeia, inasmuch as it includes all the formulas of the pharmacopeias of the United States, Great Britain, Germany, and the Homeopathic; also of the National Formulary, Eclectic Dispensatory, British Formulary, Cincinnati Academy Formulary, and the Thomsonian, Rademacher and Kneipp preparations; further, many formulas from the French, Austrian, Swedish, Norwegian and Danish pharmacopeias, from American, English and German hospital formularies, as well as of Hager's, Dieterich's, Unna's, and Lassar's besides many others.

"It is evident that such a collection must prove eminently serviceable to any physician, whether he writes prescriptions or dispenses himself, the former to refresh his memory, the latter to have as a guide, for the thousand and one things needed in practice outside of the single-remedy granule, and not supplied by manufacturers or not kept on hand. In this category may be enumerated such articles as embrocations, ointments, plasters, gauzes, collodions, glycer-

ogeletius, suppositories, medicated papers, pastes, pencils, cottons, wools, poultices, antiseptics, disinfectants, injections, inhalations, and so on. At any rate, every medical man wants such a formulary for reference in connection with his readings in order fully to understand the meaning of his several authors, especially foreign or of other schools. The binding of the volume is stout buckram is both substantial and elegant. The book can be heartily recommended."

Principals and Practice of Physical Diagnosis. By John C. Da Costa, Jr., M. D., Associate in Clinical Medicine Jefferson Medical College, Philadelphia. Octavo of 548 pages, 212 Illustrations. Philadelphia and London. W. B. Saunders Company, 1908. Cloth, \$3.50 net. W. B. Saunders Company, Philadelphia.

"Da Costa has produced in this book one of the best volumes on physical diagnosis which has come into our hands. He divides his subject into a discussion of methods and technic of physical examination; examination of the thorax; examination of the broncho-pulmonary system; diseases of the broncho-pulmonary system and mediastinum; examination of the cardiovascular system; diseases of the cardiovascular system; and examination of the abdomen and abdominal viscera.

"Especial consideration is given to clinical anatomy and the origin, mechanism and meaning of normal physical signs, not neglecting also the subjects of pathology and diagnosis. Laboratory technic is gone into sufficient to subserve ordinary needs.

"The illustrations are excellent, the text is clearly and logically written and the type, paper and binding of a kind to give a fitting presentation of a valuable book".

International Clinics A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and Other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession throughout the world. Edited by W. T. Longcope, M. D., Philadelphia, U. S. A., with the collaboration of Wm. Osler, M. D., John H. Musser, M. D., A. McPhedran M. D., Frank Billings, M. D., Chas. H. Mayo, M. D., Thos. H. Rotch, M. D., John G. Clark, M. D., James J. Walsh, M. D., J. W. Ballantyne, M. D., John Harold, M. D., Richard Kretz, M. D. With regular correspondents in Montreal, London, Paris,

Berlin, Vienna, Liepsic, Brussels, and Carlsbad. Volume IV. Eighteenth Series 1908. Philadelphia and London: J. B. Lippincott Company.

"The present number of this well known series contains four articles on treatment, four on medicine, five on surgery, three on gynecology and obstetrics, one on hygiene, two on neurology, one on laryngology, two on pediatrics and two on pathology. The articles are well written and in keeping with high standard already set by the International Clinics."

Practical Dietetics with Reference to Diet in Disease. By Alida Frances Pattee. Graduate, Boston Normal School of Household Arts. Late Instructor in Dietetics, Bellevue Training School for Nurses, Bellevue Hospital, New York City. Special Lecturer at Bellevue, Mt. Sinai, Hahnemann and the Flower Hospital Training Schools for Nurses, New York City; St. Vincent de Paul Hospital, Brockville, Ontario, Canada. Fifth edition. 12 mo. Cloth. 300 pp. Price, \$1.00 net. Mt. Vernon, N. Y.; A. F. Pattee, Publisher.

"The annual edition of ten thousand copies shows the great demand for this useful and popular book. It has been adopted as a text book, practically everywhere. Our readers need not hesitate to send for it if such a work is required."

Surgery, Its Principles and Practice. In five volumes. By 66 eminent surgeons. Edited by W. W. Keen, M.D., LL.D., Hon. F.R.C.S., Eng. and Edin., Emeritus Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Phila. Volume IV. Octavo pp. 1194, with 560 text illustrations and 22 colored plates. Philadelphia and London: W. B. Saunders Company, 1908. Per volume, cloth, \$7.00; half morocco, \$8.00 net.

"This superb work is rapidly nearing completion. The present volume is fully up to its predecessors in every respect. The subjects treated are hernia, rectum and anus, examination of urine, kidney, ureter, and the suprarenal gland, bladder, prostate, penis and urethra, scrotum, etc., intestines, ear, eye, military surgery, naval surgery, tropical surgery and influence of race, sex and age in surgical affections.

"Each article is written by an expert selected by the eminent Editor for fitness for the particular work with the result that the text is the very best that can be produced, concise, clear and up to date.

"The illustrations are works of art, and answer their purpose perfectly.

"We may justly say that this is one of the most practical, useful works on surgery that has ever been produced."

High-Frequency Currents. By Frederick-Finch Strong, M. D., Instructor in Electro-Therapeutics at Tuft's College Medical School, Boston. With 183 illustrations, 282 pages. Price, cloth-bound, \$3.00. Published by Rebman Company, 1123 Broadway, New York City.

A volume that essentially would only be appreciated by those who had thoroughly familiarized themselves with electricity and its general therapeutics. To those familiar with the essentials this text will prove exceedingly interesting. A depth of the author's research along this line may be gained through his prefatory remarks in his volume:

"Although recent and revolutionary, this hypothesis has met with instant and eager acceptance on the part of the leading scientists throughout out the world. In the bright light which it throws on the phenomena of the universe, much that was dark and undefined has become lucid and coherent. All sciences have become united by invisible links, and we have for the first time in the history of the world a complete, harmonious system of natural philosophy, by which all facts of nature, however diverse, may be co-related and traced to a common origin. And the crowning postulate of this wonderful new system is identical with the most ancient theory of the universe which history records. In other words, science informs us that all natural phenomena result from vibration in a medium of a primitive nature, which appears to be nothing more nor less than electricity. All forms of Force, from the attraction of the Sun for the Earth and the vital phenomena of the Human Organism are fundamentally Electrical Vibrations.

"The 'High-Frequency Currents' are Electrical Vibrations artificially produced, which bear a certain relation to the currents which traverse the nerves in the maintenance of life in the human body. Being Vibrations, rather than flowing streams of Electrical particles, the High-Frequency Currents penetrate glass as readily as a sound wave would traverse a plate of metal, and pass through the human organism without producing the slightest sensation.

"The discovery and application of High-Frequency Currents has resulted mainly from the work of two American scientists, Tesla and Elihu Thomson. Tesla first recognized the wonderful therapeutic possibilities of High-Frequency Currents and prophesied that they would ultimately supersede the older systems based upon the thera-

peutic use of drugs; clinical results recorded during the past five years go far to confirm the accuracy of Tesla's prophecy.

"Although a greater part of the literature of High-Frequency Therapeutics ascribes the development of these currents for the treatment of disease to d'Arsonval and Oudin, it is a fact of record that the subject was developed independently by the present writer on distinctly different lines. Whereas d'Arsonval's work was solely with Low Potential Currents, while Oudin's High-Potential effects were of Mono-polar character and therefore limited to the treatment of local conditions—the writer from the very first employed the Bipolar High-Potential Currents of Tesla, and it is due to this fact that the System of Technic developed by him for the therapeutic application of Tesla Currents possesses so much wider field of usefulness and produces so many more distinct physiological effects than the methods developed by Oudin and d'Arsonval. For the past decade the writer has been continuously engaged in a clinical and laboratory study of the various types of High-Frequency Currents; hundreds of cases have been treated, and many important facts recorded, which are given to the profession for the first time in the present volume.

"At the request of a number of his colleagues the present writer has not only gone into minute details in connection with the physical laws and methods of using the various apparatus herein described, but has compiled a concise Elementary Textbook containing the essentials of the entire subject of Electro-therapeutics. This little book, which is a pocket edition, should be carefully studied as a preliminary introduction to the present volume."

Diseases of the Digestive Canal. By Dr. Paul Cohnheim, Specialist in Diseases of Stomach and Intestines, Berlin. From second German edition. Edited and translated by Dudley Fulton, M. D., Lecturer on Medicine, University of Southern California, Los Angeles. Illustrated J. B. Lippincott Co. Philadelphia and London, 1909. Cloth. 8vo. Pages xvi—373. \$4.00 net.

"Seldom do we come across a book that is so direct and practical in its clinical teachings as this one on diseases of the esophagus, stomach and intestines—either in the way of diagnosis or treatment. Theoretic discussions are omitted, and are replaced by the results of observation and experience. Had the author waited only a few months to have brought also the revelations of the esophagoscope and gastroscope, as recently announced, it would have been a nearly perfect clinical book on the

subjects discussed. The plain, simple style of the author in reaching his diagnosis, the thoroughness of his questionings, the interpretations of his findings, etc., all contribute to making this the practical book needed by the practitioner who has to deal with diseases of the parts named in the title. Appended to the text is a short chapter titled "A, B, C of the most important disturbances of the digestive tract," which, of course, is a resume of the contents, but put in such form as to be easily remembered and very helpful at the bedside. The proper use of the teachings of this book are to be most unreservedly commended to practitioners."

Seven Hundred Surgical Suggestions. Practical Brevities in Surgical Diagnosis and Treatment. By Walter M. Brickner, B.S., M.D., Assistant Adjunct Surgeon, Mount Sinai Hospital, New York; Editor-in-Chief, American Journal of Surgery, Eli Moschcowitz, A.B., M.D., Assistant Physician, Mount Sinai Hospital Dispensary, New York, and Harold M. Hays, M.A., M.D. Third Series. Duodecimo; 153 pages. New York: Surgery Publishing Co., 92 William St. Price, semi-de-lux, \$1.00; full library de lux, ooze leather, gold edges, \$2.25.

"This volume is literally "packed full" of useful and valuable information for the general practitioner or surgeon. Written in short, terse epigrammatic paragraphs it puts its hints to the reader in a manner which makes a lasting impression. In its present and enlarged form it is a gem in all respects.

"Any work which would call for three editions in two years, each larger and better than the previous one, is an indication of its usefulness and popularity and Seven Hundred Surgical Suggestions surpasses them all. The originality of its contents is in keeping with its elaborate and attractive mechanical make-up, and every practitioner should have a copy."

Neurological and Mental Diagnosis. A Manual of Methods. By L. Pierce Clark, M.D., Senior Attending Physician, Hospital for Nervous Diseases, New York; Visiting Neurologist to the Randall's Island Hospitals and Schools, New York; Consulting Neurologist to the Manhattan State Hospital, N. Y., and the Craig Colony for Epileptics, Sonoma, N. Y.; Assistant Neurologist, Vanderbilt Clinic (Columbia University); Fellow of the American Neurological Association, etc., and A. Ross Dieffendorf, M.D., Lecturer in Psychiatry in Yale University; Assistant Physician and Pathologist, Connecticut Hospital for Insane; Member of the Ameri-

can Neurological Association, of the New York Neurological Association, of the New York Psychiatric Society, and of the American Medico-Psychological Association, etc. New York: The Macmillan Company, 1908. All rights reserved.

This practical volume fills a long-felt need. The thoroughness with which the writers have treated the subjects of neurological diagnosis and examinations will be valuable to both the specialist and general practitioner. Photographic illustrations indicating methods of diagnosis, facial appearances, atropies, motor-points, and the nerve distributions are of a quality unsurpassed in any work on neurology to the present time, indicating a degree of thoroughness and knowledge of technic deserving of commendation. The work should be in general use by the profession. The writers and publishers are to be congratulated on the general features and excellence of this work.

Abstracts of the Leading articles of the month.

Pericolicitis Sinistra.—Roberts (Liverpool Medico-Chirurgical Journal) calls attention to the fact that coincident with the increased frequency of appendicitis cases of colitis and pericolicitis are more commonly encountered. In the mildest forms of colitis the mucous membrane may be assumed to be irritated and abraded in patches with infiltration and thickening of the muscular coat and pain suggestive of irritation and involvement of the overlying peritoneum. In more advanced cases the peritoneal involvement leads to the formation of lymph which covers the bowel and often forms longitudinal bands on its surface. This newly formed lymph is apt to form adhesions to contiguous structures. Either with or without perforation of the bowel peritonitis may develop, and may be localized or generalized.

The history given by patients is quite typical. There is a long period of constipation, relieved only by aperients, varied at times by spells of diarrhea. The feces are made up of hard masses covered with flocculent mucus. The next symptom developed is pain referred to the left side of the abdomen, from the costal margin to the iliac crest. It is aggravated by lying down, particularly on the left side. Later there is tenderness on pressure. Pain may become temporarily severe and colicky in character. The pain may be aggravated by the taking of food and may be associated with nausea or vomiting. The left half of the abdomen is fuller than the right. In

In the left iliac fossa the iliac colon may be felt dilated and full of fecal matter.

He says it is usually possible to demonstrate that the colon is thickened, and that it appears unduly fixed when rolled under the finger.

There is always pain, elicited by pressure, and usually anemia, loss of appetite, occasional headache, quickened pulse, and mental depression. After emptying the bowel by copious enemata it can still be easily felt and examined. Normally it should be impalpable. It is found as a thickened cylinder of less diameter than a normal colon, or a thickened flat ribbon, giving a soft, doughy feel. One factor common to all the cases is prolonged constipation.

As to treatment, after thorough irrigation and emptying of the bowel, using both enemata and laxatives, a mild antiseptic colonic lavage is indicated, together with intestinal antiseptics, such as salol or guaia-col. If these measures fail it may be necessary to resect the damaged portion of the bowel. The circumscribed form of pericolicitis follows ulceration and very often leads to mistaken diagnosis, tumor being strongly suggestive of carcinoma.

The General Consideration of the Therapeutic Use of Diet.—Hutchinson, in the London Practitioner, calls attention to the loose way in which dietetic means are employed as compared with the relative exactitude and consistency with which drugs are prescribed, and says that this is due in no small measure to the lack of proper system in instruction in dietetics in our schools. In this article he endeavors to sketch very briefly the general uses and limitations of dietetics in the cure of disease, and in the conclusion of the article he lays down some general rules which may well be borne in mind. (1) When prescribing a diet for a case of local disease, one must take care not to sacrifice the whole to the part. (2) No article of food should be forbidden unless one has good reason for doing so. (3) In acute diseases one should recommend, in chronic forbid. (4) Before recommending any article, find out whether the patient likes it and whether it agrees with him. (5) If an article disagrees it is better to reduce its amount in the diet than to cut it off altogether. He further calls attention to the comparative immunity of the carnivora to tuberculosis and to the success which has attended a raw meat diet, and while he does not maintain that the subject is definitely settled, he suggests that it is well worthy of consideration. If we would escape the charges of inconsistency and arbitrariness apt to be brought upon us with some justice when we come to the dietetic part of

our plans of treatment, we should never make a change in a patient's customary diet unless we have definite grounds for so long.

The Pathogenesis of Acute Purulent Otitis Media in Children.—Tanturi (Gazzetta internazionale di Medicina) calls attention to the observation of Dieulafoy, who stated that like the pathogenesis of appendicitis, where the enclosed space of the appendix increased the virulence of the intestinal infection, so in the enclosed space of the middle ear, the virulence of the infection was enhanced by this very enclosure. His opinion coincides with that of Dieulafoy in this. To prove the correctness of these views, the author experimented on rabbits. He placed a cotton tampon in the post-nasal space, to close the ostium of the Eustachian tube. The procedure, in itself resulted every time it was tried in producing a middle ear infection.

On commenting on these experiments, Professor Grandenigo in Turin holds that perhaps the cotton tampon becomes infected in the post-nasal space, and the tympanic cavity becomes secondarily infected, a mode of infection of the ear which is very often seen in clinical observation where the pharynx is filled.

Severe Hemorrhage in the New-Born.—Cathala and Lequeux (Bull. de la Soc. d'Obst. de Paris) describe a very unusual case of severe hemorrhages taking place in a new-born child at the end of the first month of life. The infant was a twin and the other twin remained perfectly healthy. Such hemorrhages generally occur before the sixth day of life. The authors state that they are the result of intoxication beginning in the gastrointestinal canal, or caused by syphilis or other microbic infection, which becomes generalized and produces changes in the blood, causing hemorrhages into the internal organs as well as from nose, eyes, etc. The intestinal infection may be streptococcic or with the bacillus coli. In this case the streptococcus was found in the blood of the heart. The child had a slight gastro-intestinal trouble, and an enema caused the infective material to enter the blood vessels and so become generalized.

The Leukocytosis of Whooping-Cough with Analysis of 112 Cases.—Combie (Edinburgh Medical Journal).

The value of the author's paper consists in the large number of personal observations which he reports.

In 73 cases of uncomplicated pertussis during the first three weeks of the disease a leukocytosis of less than 10,000 was met with in only 7 cases, while the leukocytosis

per se may not be a reliable means of diagnosis, the lymphocytes are always increased absolutely or relatively.

He says that the degree of leukocytosis varies directly with the severity of the attacks, and that in the catarrhal stage it is a useful guide as to prognosis. In the later stages it varies directly with the number severity of the paroxysms.

He reports 4 cases complicated by pneumonia, all of which proved fatal. With 3 of these there was an enormous leukocytosis 57,800; 141,000 and 225,000 and yet in all instances differential counts showed the percentage of lymphocytes to be greater than that of polymorphonuclears.

The author says that blood counts to be great assistance in the diagnosis of doubtful cases.

Acute Meningitis of the Convexity.—

Hemenway (Arch. of Pediat.) records two cases. The first was in a girl, aged 20 months. The symptoms were coma, twitchings, strabismus, nystagmus, vomiting and diarrhoea. There was no bulging of the fontanelle, and the pulse and respiration were regular. Opisthotonos and Kernig's sign were absent. The discs were normal. The cerebro-spinal fluid was clear and sterile. Broncho-pneumonia developed in the third week, but soon cleared up. Death took place from exhaustion on the seventy-third day, preceded by a fresh attack of broncho-pneumonia. The autopsy showed purulent meningitis of the superior and lateral aspects of the parietal and frontal lobes, most marked on the left side. The brain substance was normal. Broncho-pneumonia was present in the left lower lobe. A pure culture of the pneumococcus was obtained from the meningeal exudation and the lung. During the diagnosis of cerebro-spinal meningitis, acute enterocolitis with nervous symptoms, and general tuberculosis was successively made. The second case was a girl, aged 17 months, whose clinical history closely resembled that of the first case, but the broncho-pneumonia was less severe. Recovery took place, but the child was left mentally defective.

Mastoiditis in Infants.—G. Nove-Jose and Maurice Jacod (Archives Generales de Chirurgie) describe mastoiditis in the infant as of frequent occurrence and appearing suddenly without many premonitory symptoms. An abscess appears superficially without much pain or fever. The condition is predisposed to by states of general malnutrition, infectious diseases, and tuberculosis. The abscess pushes forward the auricle. The mastoid process is much more simple than in the adult, having from one to three large cells. The Eusta-

chian tube is short and widely open as to allow of easy infection from the nasopharynx. Otitis, adenoids, and naso-pharyngeal catarrhs are the immediate cause, the form of micro-organism being unimportant. The prognosis is good except in tubercular cases. The treatment consists of evacuation of the abscess, removal of diseased bone, and drainage.

Yeast in Gonorrheal Vaginitis.—Kehrer (Deutsch. Med. Woch.) has used preparations of yeast in gonorrheal vaginitis since 1901. After four to six days of treatment in acute cases, the condition is cleared up, and the gonococci cannot be found in the discharge. Also in erosions and cervical endometritis a distinct improvement is seen. In chronic cases, as a rule, the results are not so good, and if no results are obtained in four days the treatment should be changed. He feels sure that the applications of solutions of yeast in gonorrheal vaginitis is the most valuable prophylactic method we have to prevent upward extension of the infection.

Myelocytes in the Blood of Infants.—Zelenski and Cybulski (Rev. med. de la Suisse Rom.) examined the blood in a number of cases, using Ehrlich's triacid stain. They found myelocytes in from 1 to 17 per cent. in eight cases of pernicious anemia in infants. In six cases of prematurely born infants they were present in great numbers. They were also found in some cases of hereditary syphilis, and a few times in severe cases of rickets, and in scrofula and in phthisis. They conclude that myelocytes are present in the blood in all cases of chronic disease in infants, the number depending chiefly upon the age of the infants, being greater the younger they are up to two months.

Rapid Artificial Dilatation by Bossi's Method.—Joaquin Cortiguera considers Bossi's dilator the best instrument for dilatation of the cervix when rapidity is desired. The various other methods are much slower and expose the patient to the dangers of infection for a longer period of time. The various instruments used are more apt to become septic while in use. To apply the different forms of rubber bags a primary dilatation is necessitated before they can be introduced. Deep incisions require suture. Bossi's dilator is easily made aseptic and easily applied. There is no need of serious tears or hemorrhage if it is applied slowly, from three-quarters to one and one-half hours being used in completing labor. This method should be used only when there is serious danger to the mother. Dilatation should

reach a little more than the diameter of the head, since some contraction takes place after the withdrawal of the instrument. It is indicated at all stages of pregnancy when it becomes necessary to terminate pregnancy for the sake of mother or child. It is contraindicated whenever the pelvis is too small to permit of natural delivery. It is indicated when the fetus is abnormally large, as when labor is delayed more than nine months; when the shoulders are very large; when the internal os is contracted; in eclampsia; and in placenta normally implanted, but prematurely separated. In placenta previa it is doubtful if it is as efficacious as version.—*Journal de Medecine de Paris*.

The Effect of Oxygen Upon Wounds and Infections.—Burkhardt (*Deutsche Zeitschrift für Chirurgie*) summarized his findings as follows:

1. Contact with pure oxygen gives rise in wounds to a well-marked vascular injection, and there appears a state of arterial hyperæmia. The wounds remain more moist and the formation of granulation tissue is stimulated.

2. Cultures of facultative aerobic bacteria, or artificial nutrient media, are considerably retarded in their development when grown in an atmosphere of pure concentrated oxygen, but they are not destroyed.

3. In the animal body even a supply of oxygen in great abundance applied to the infectious focus does not seem to inhibit the growth of the bacteria to a notable extent; neither is this the case in general infections when the entire body of the laboratory animal is bathed in oxygen. The animal experiments indicate, however, that there occurs a certain slight diminution in the virulence of the bacterial poisons.

4. In the peritoneum the contact with pure oxygen produces a state of mild inflammatory irritation. A rather considerable hyperleukocytosis develops, especially in the simultaneous presence of fluids in the abdominal cavity, absorption in the abdominal cavity is retarded.

5. Ozone seems to be better adapted than ordinary oxygen for the control of infections, especially in body cavities, which are easily filled with the gas. It certainly appears promising to continue the experiments with ozone in septic infections.

Pathogenesis of Nervous Complications in Pertussis.—Durando Durante finds that nervous complications of pertussis are not rare. He has made a study of the cause of the occurrence of these symptoms. The clinical picture is very various and differs in intensity and extent. The commonest

symptom is convulsions. There are various forms of paralysis, bulbar, spinal, and peripheral polyneuritis, and troubles of the special senses. The pathogenesis is not well defined. The rapid onset, short duration, and recovery indicate that there is no permanent lesion. They may result from hemorrhage, and changes in the circulation due to the violence of the cough, and increase of blood pressure. Another explanation is that they are due to carbonic acid poisoning from asphyxia. Predisposing causes are weakness, loss of sleep, and inability to retain food. The specific toxic element of the disease is an important factor. The author has made a study of the expectoration in these infants. He finds that there is marked increase in virulence of sputum from such cases.—*La Pediatria*.

Contribution to the Study of Oppenheim's Disease.—Simonini describes a case of Oppenheim's disease observed by himself. This disease consists of a flaccid paralysis involving most of the muscles of the body, more markedly those of the arms than of the legs, accompanied by absence of reflexes and of contractures. The muscles of the neck and back are affected so that the patient is unable to sit erect or hold up the head. Sensation is perfect. The affection is congenital. There is no atrophy of the muscles and those of the face are not affected. Electric excitability varies and may be diminished. Intellect is not affected, nor the special senses. The affection seems to be a miotonia rather than a paralysis. There seems to be no central nervous lesion but rather a non-development of the muscular system. The affection is susceptible of amelioration by treatment.—*Rivista di Clinica Pediatrica*.

A Case of Diphtheria Associated with Impetigo ('*Lancet*,' August 8, 1908)—T. T. Puddicombe describes the case of a boy, aged 8 years, who was admitted to hospital with a history of spots on the face for six days and sore throat for one day. There was slight congestion of the fauces and a patch of membrane on the right tonsil, slight nasal discharge, and four definite spots of impetigo on the upper lip with one on the chin. The temperature was 99° F. He did not appear ill, or complain of his throat. Four thousand units of anti-diphtheritic serum were given, and the case ran a normal course with the exception of the occurrence of an enlarged sub-maxillary gland at the end of the third week. The impetigo was cured in a week with ammoniated ointment. Swabs were taken from the nose and throat, also two of the scabs were removed from the upper lip and a swab inoculated from the moist surface underneath.

The culture from the impetigo spots gave the most abundant growth, and that from the nose very little. Bacilli resembling the Klebs-Loeffler organisms were found on microscopic examination in each case. Further investigation of the culture by the Lister Institute showed that the organism was really the Klebs-Loeffler bacillus of a virulent type. The case is of very great importance as indicating the possible connection between impetiginous lesions and diphtheria.—British Journal of Children's Diseases.

Operative Treatment of Intra-Oral Cancer.—Childe (British Medical Journal) dwells on two principles of operative treatment of oral cancer. The neck should always be operated on first, then followed at once or later by the excision of the primary growth. By ligation of the lingual and facial arteries on the affected side the severe hemorrhage is obliterated if the second stage of the operation is undertaken at once, and, if delayed, tends to starve the cancer cells and diminish their activity in the interval. The removal of the primary growth is accomplished with greater precision, and cancer cells which are left may be destroyed for want of nutrition. A communication between the wound in the mouth and the large wound in the neck should be avoided if possible. This can be done by dividing the operation into two stages. Within a fortnight the wound in the neck operation is healed, and the excision of the growth can be accomplished bloodlessly and without the necessity of a communication between the two regions. In conclusion, he condemns the therapeutic test by the administration of iodine, which should never be used unless the microscopic examination proves very uncertain. It should then be pushed rapidly and its effects watched for only a limited time. Early diagnosis and operation is the only hope.

The Diagnosis of Enlarged Bronchia and Mediastinal Lymph-nodes by Physical Signs.—Nagel, (Jahrbuch für Kinderhk,) says that occasionally the existence of enlarged bronchial and mediastinal lymph-nodes can be diagnosed from the symptoms of intrathoracic pressure, namely, pain between the scapulæ, dyspnea, dysphagia, venous congestion, differences in the radial pulses, reflex cough, cardiac arrhythmia, bradycardia, and paresis of the vocal chords. In addition to these symptoms a number of physical signs have been described by various observers. The most important of these are dullness, bronchial breathing, and rales between the scapulæ at the level of the third to fifth dorsal vertebrae, tenderness over the second to seventh dorsal spines; (spinalgia); and the detect-

ion of tender nodes by means of an inflatable esophageal sound. The Roentgen rays are also of great diagnostic aid, especially in caseous and calcified lymph-nodes.

Recently Von Koranyi described a method of percussing over the spinous processes of the vertebrae, which De la Camp and the author have utilized for the diagnosis of enlarged lymph-nodes. Normally we find dullness over the first four dorsal vertebrae, and resonance from the fifth to the tenth dorsal vertebrae. In 26 children with general glandular enlargement, De la Camp found 14 in whom there was dullness over the fifth dorsal spine; in 7 of these the Roentgen rays confirmed the diagnosis of enlarged infratracheal glands. In 50 similar cases, the author found 16 with dullness at the same site. In 3 experimental cases, where paraffin was injected postmortem in vicinity of the bifurcation, the author succeeded in demonstrating a previously non-existing dullness over the fifth and sixth dorsal spines. Dullness in this region may also be due to mediastinal tumors, pleural effusions, and atelectasis, so that these conditions must be excluded before the diagnosis of enlarged lymph-nodes is made.

A Case of Generalized Vaccinia, With Remarks on the Pathology of the Disease.

—Oldham (The Dublin Journal of Medical Science) reports a case of vaccination, which on the ninth day began to develop into generalized vaccinia, involving most of the arm. He puts forward the theory that generalized vaccinia is an endeavor on the part of the cytocytes vaccinia to revert to cytocytes variola. The author quotes many authorities who agree that both variola and vaccinia are caused by the same organism, only that in the latter condition the organism is attenuated, and its life cycle which is asexual takes place in the cytoplasm of the cell only. In variola the life cycle which is asexual takes place in the cytoplasm and that which is sexual in the nucleus of the cell.

In the internuclear development of the cytocytes variola the protozoon develops spores which are air borne. The product of the cytoplasmic cycle of the cytocytes vaccinia are not air borne. Hence communicability is explained.

Contribution to the Study of the Blood in Malaria.—Samuel Sereni has made experiments to ascertain whether the increased specific gravity of blood corpuscles containing malarial parasites has not something to do with their agglutination and deposit in certain organs. He has ascertained that an increase in specific gravity does exist. He considers it altogether probable that this condition favors the stagna-

tion of the corpuscles containing parasites in the tissue meshes of certain organs, especially the brain, the normal corpuscles being found almost absent. Here on account of the small size of the capillaries, the circulatory resistance is great, and the degenerative changes of the endothelia are great. Stasis becomes marked and the circulation is so slow and imperfect that these heavy cells are deposited.—*Il Policlinico*.

Urobilinuria not a Sign of Hepatic Insufficiency.—A. Gilbert and M. Herscher tell us that all the clinical facts show that the kidney rather than the liver has to do with the production of cholemia. The kidney acts as a chemical reducer whose power can be increased or diminished. Urobilin is not the pigment of a diseased liver but is derived from normal bile pigments, produced by reduction in the kidney. Urobilinuria is not a sign of liver insufficiency, but an indication of cholemia which allows us to judge of the kidney condition. The authors give illustrative cases in three groups: urobilinuria with normal liver; absence of urobilinuria with hepatic insufficiency; and absence of urobilinuria when there is hepatic insufficiency followed by urobilinuria when the liver begins to function normally.—*La Presse Medicale*.

Chronic Pulmonary Edema, Anasarca and Anaemia of Neurotrophic Origin in an Infant.—Petrone (*La Pediat.*) reports the case of a male, aged 11 months. Eight days after birth œdema limited to the feet was noticed, which lasted some months; otherwise the child seemed well. At three months pallor was noticed, which kept on increasing. There was a history of an attack of fever and vomiting with œdema of the legs, hands and face a month before admission. Examination showed dulness and fine mucous rales at both bases, slight enlargement of liver, pallor, and more or less general œdema. There was polynuclear leucopenia. A faint trace of albumin in the urine. Death occurred four weeks later. The autopsy showed anaemia of all the organs, chronic œdema of lungs, slight fatty degeneration of liver and kidneys. In discussing the pathology of this case the author excludes cardiac or renal origin, because apart from anaemia these organs were healthy; nor does he admit that the anasarca was dependent on the anaemia, because it commenced soon after birth, and because of the disproportion between the two as cause and effect. For the same reason a toxæmic origin must be excluded. He is obliged to fall back on a nervous origin, and places the case in the category of the trophœdema described by Meige and others. In no case, however, has œdema

localized to the lungs been recorded as in this. It is also noteworthy that in this case the cutaneous œdema began two months before death, and that, at first localized to the extremities of the limbs and face, it afterwards became general. Trophœdema is sometimes seen as an hereditary affection, sometimes occurring in only one member of a family, as in this case; it may be congenital, but is more often acquired about the age of puberty. In this case, although the pulmonary œdema had existed for some time, a congenital origin cannot be admitted, because the infant, after the disappearance of the early œdema of the limbs during the first month of life, remained for some time comparatively well, which would be incompatible with an œdematous affection of both lungs. Trophœdema when once established does not, as a rule, retrocede, and when localized to the limbs does not disturb the general health; in this case, however, the early œdema did retrocede and the special localization in the lungs caused the death of the infant. The author rejects the theory of Long, of an abnormal development of the middle layer of the blastoderm, and that of Domenici, of a vascular change left by a foetal inflammation. Neither does he share the opinion of Meige, that of a change in special trophic centres, nor that of Vallobra, of lymphatic hypersecretion due to lesions of special secretory centres, nor that of Unna, of a venous spasm. The writer puts forward two hypotheses; one, that of a lesion of special trophic centres which preside over the nutrition of the blood-vessels, producing a change in the walls of the capillaries with increase of their permeability and transudation of lymph; the other, which admits an obstructed flow of lymph by spasm of the lymphatic vessels due to a lesion of the respective vasomotor centres.

Mental Symptoms Due to Dechloridization.—Courmont and Cremieu (*Jour. des Practiciens*) draw attention to the evils which follow prolonged dechloridization. The nervous crises disappear at first, but there may supervene a dangerous state of mental depression characterized by melancholy, and attempts at suicide. Immediate employment of the chloride of sodium is indicated.

Voisin and Rendu advise: Ten days of 4 grams of sodium bromide, ten days of 8 to 10 grams and a third period of ten days with neither bromide nor chloride of sodium, the two previous periods having been on normal diet. They say that the deprivation of salt is less harmful if the bromide be not given at the time.

Some Italian authorities condemn treat-

ment by dechloridization. They believe it weakens the patient.

It was Andre Viteman who in 1907 showed that dechloridization facilitated the absorption of bromide salts within the subarachnoid spaces.

The Treatment of Acne Rosacea.—

Zeissl (Munch. Med. Wchschrift.) in a series of cases of acne rosacea succeeded in gradually removing the eruption by means of painting with undiluted iron chloride. The applications were repeated every morning and evening, and resulted in a complete cure. A somewhat solid crust is apt to form at the end of four or five days, and the paintings should be omitted until this crust is cast off spontaneously. When there is much tension the surface may be covered with a clean rag that has been thickly spread with Wilson's salve or some other suitable ointment. In the presence of severe inflammation an ice bag may be applied. As a rule, frequent interruptions are unavoidable, and the treatment is therefore likely to last about three or four months until the cure is complete.

On a Little-known Type of Amblyopia in Children.—

Stephenson (The British Journal of Children's Diseases) called attention to a class of cases which came for advice with lessened acuity of vision unimproved by glasses, whose discs, on ophthalmoscopic examination presented the appearance of post-neuritic atrophy. The atrophic changes nevertheless are not complete, and may be so slight as to escape recognition in the absence of careful ophthalmoscopic examination. In the cases concerned, which it was the object of the communication to draw attention to more particularly, the appearance of the discs are best characterized as those of incomplete post-papillitic atrophy of the optic disc. They are bilateral, though possibly sometimes more pronounced in one eye than in the other. Inquiry into the child's history often elicits the fact that when an infant there has been a "cerebral" or "meningitic" illness, marked by "fits," convulsions, headaches, vomiting, constipation, retraction of the head, temporary paralysis, squint, unconsciousness, and so forth. On recovery from the attack, sight was found to be partially or totally lost, but has since been more or less regained. The conclusion is almost inevitable that an infantile meningitis or encephalitis was accompanied by optic papillitis, and that both the general and the local conditions had to some extent been recovered from. The incomplete optic atrophy seen later by the ophthalmic surgeon then, is in this view to be regarded as a sequel to the meningitic papillitis. The

type of case indicated rather than described above must be carefully distinguished from the other kinds of temporary blindness which may occasionally arise under somewhat similar conditions, viz., "fleeting amaurosis" and "post-eclamptic amaurosis." The former is met with in infants suffering from basal meningitis, and sight under such circumstances appears to be wholly lost without ophthalmoscopic signs, the children subsequently slowly recovering both vision and health. The second class appears to result from convulsions lasting for some hours, days, or even weeks. When the child recovers consciousness he is found to be blind without ophthalmoscopic signs, and as accompaniments may be noted aphasia and hemiplegia of a temporary or of a more lasting type.

The suggestion is that the nerve storm might involve the visual cortical centres as well as the motor centres or speech centres, the period of discharge being followed by a period of exhaustion. The distinction between the several forms of blindness mentioned can be distinguished only by ophthalmoscopic examination. In the acute cerebral amaurosis in the post-eclamptic cases the optic discs show no changes, whereas in the other class they exhibit incomplete atrophy. The distinction, then, can be difficult only when a child is so young as to resist a full ophthalmoscopic examination of the eyes.

Blood Pressure in Children.—Stowell (British Journal of Children's Diseases) made observations with the Riva-Rocci instrument on the blood-pressure of 216 patients whose ages ranged from three to seventeen years, and came to the following conclusions: Vascular tension is lower in childhood than in adult life; its rise and fall are quickly influenced by emotions, as in adults; diseases of the nervous system give high pressure; the acute diseases with high temperature may give either high or low pressure; sclerosis of arteries is almost unknown in childhood, so that the use of a sphygmomanometer for its detection is needless; blood pressure readings are of interest physiologically, but have little clinical value in childhood.

The Prognosis of Heart Disease in Children.—

Stanley (British Journal of Children's Dis.) says that one of the most important problems that confronts us is the future of a child who has a valvular lesion. That future depends in great measure on the child's social environment. We were formerly inclined to make up our minds concerning the future at too early a date in the history of heart lesions in children. From observations, extending over a number of

years, he was certain that great improvement may and does take place. If, however, the lesion be a severe one with much valvular deformity, if there be excessive hypertrophy, especially if there be any pericardial adhesion, or if there be any reason to suspect pericardial adhesion, the outlook is bad. It was difficult to say exactly what denotes a severe mitral lesion, but when the murmur varies under observation, especially if a shifting diastolic be present as well as a systolic, he regarded the lesion as severe. If a child with cardiac valvular disease grows there is a better chance for the heart than if he remains undersized and puny. That point he did not think had been sufficiently emphasized. The period of puberty requires particular attention, and it is just at this time in deference to what we call civilization that the strain of education is greatest. It is then that there should be the greatest care, and a period of daily rest on the back to compensate for rapid growth and the great cardio-vascular changes.

Dr. C. W. Chapman felt strongly that to say that the prognosis of a child with valvular lesion was bad was wicked, as many of those cases did wonderfully well. He had as a patient an old lady, aged 76 years, who was well but still had a presystolic murmur. A child with aortic regurgitation, if it grew fast, would have faintness due to cerebral anemia, but congenital cases often improved with treatment, and there was no justification for an universally gloomy prospect. In some congenital cases he had seen the murmur entirely disappear. Cases must get better, as they were very seldom seen on the post-mortem table. Also in the case of children the parents as well as the child had to be considered in giving a prognosis. A bad prognosis deprived the parents of hope, and they had the idea that all treatment would be unavailing. Even if the treatment would extend the life three or four years, it was an important matter for the parents.

Suprarenal Tumor of the Ovary.—Gaudier (Rev. Fran. de Med. et de Chir.) describes a tumor connected with the ovary of the size of an orange occurring in a child of four years. This was found to be a growth of a suprarenal body. The tumor caused menorrhagia and metrorrhagia for three months before seen. The hair was much developed about the vulva, the labia were pigmented, the breasts much developed, brownish and showed tubercles about the nipples. Suprarenal tumors are found in the kidneys and hepatic tissue along the abdominal sympathetic system and in the neighborhood of the geni-

tal organs. They may trophy or hypertrophy, and are generally found in young subjects.

Subconjunctival Injection of Fluids and of Sterilized Air

--Many clinical observers have experienced excellent results from the subconjunctival injections of various substances—normal saline, stronger solutions of chloride of sodium, sugar, cyanide of mercury, etc. Some have maintained that it matters very little indeed what substance is injected, and that the effect is due not to the substance itself but to the irritant action produced by the foreign fluid upon the tissues, that it does not obtain entrance to the eye at all. After subconjunctival injection of saline, for example, the aqueous is found to be more albuminous and richer in agglutinins and precipitins, which are normally present in minute quantities. Wessely showed this, and, further, that the difference depended almost altogether upon the enlargement of the lumen of the neighboring vessels; the same effect can thus be produced by mechanical or electrical irritation, apart from any injection at all. Best has continued these investigations with the view largely of discovering the effects upon the cells themselves. Glycogen is practically absent from the normal eye of the rabbit, but is found in great abundance in the retina after subconjunctival injection. The other parts of the eye are not thus affected. Even in the retina glycogen is not equally distributed, but is chiefly to be found in the nerve fiber layer, in the ganglion and inner molecular layers, and in the space between the hexagonal pigment cells and the rods and cones. It is probable that its presence in these parts is due to local cell activity, for it is not found in the vessels of either retina or choroid; possibly the seat of active formation is the glia cells in the layers mentioned. It is also worthy of attention that exactly the same results follow injection of numerous different substances, and even such a procedure as cauterization of the conjunctiva; it appears, that is, to be a result of irritation of tissues, the actual nature of the irritant not being of great importance. Koster was among the first, if not actually the first, to inject sterilized air into the anterior chamber, and he found benefit from the procedure in cases of tuberculosis of iris and cornea, both suppurative and non-suppurative. The two Tersons employed subconjunctival injection of air, and found the method harmless and not painful. It appeared to great advantage in the treatment of photophobia, where it had almost a specific action, and was useful also in cases of sclerotizing keratitis and of marginal

keratitis. In hypopyon ulcer, too, good has seemed to result from its use. The analgesic action is very marked. Frenkel is uncertain whether to attribute this to compression of the nerves or to a direct action of the oxygen in the air upon the nerve fibers. Air injections do not seem to have any value in diseases of the posterior portions of the eye.—*Edinburgh Medical Journal*.

The Physiological Consequences of Inequality in the Mammary Glands.—

Variot and Lassabiere ('*La Clin. Infant.*') examined 550 wet nurses at the Hospital des Enfants-Assistés, and found a difference in volume of the two breasts in 419. Predominance of the left breast was noticed in 51 per cent., equality in 24 per cent. The average excess in volume was 1.9 for the left breast and 1.4 for the right. The difference in volume of the breasts had a direct effect on the secretion of milk, particularly on its quantity and composition, which vary in each breast. When the inequality was marked the gland tissue in the smaller seemed atrophied, and only able to furnish an amount of milk relatively smaller in proportion to the other breast, which was hypertrophied. Thus in 40 instances the quantity of milk contained in each of the two breasts varied, according to the difference in volume, between 46 c.c. and 335 c.c. of milk. In 17 instances analysis was made separately of the milk from each breast, and it was found that the chemical composition varied, and was most marked in proportion to the unequal development of the breasts. The variation was most marked in the case of fat, amounting to 52, 61, 93, and even 120 per cent. in extreme cases. With regard to sugar, it amounted to a diminution of 57 to 50 per cent. and with regard to casein, to an increase from 2 to 5 per cent. The habitual predominance of volume of the left breast seemed due to the fact that the wet-nurses, for reasons of convenience or habit, suckled more often with this side, and the secretion became more feeble in the other on account of suction being less frequent and prolonged. Asymmetry of the mammary glands is probably transmissible by heredity. To remedy this condition the infant should be suckled first from the smaller breast.

The Action of Thiosinamin in Traumatic Strictures.—Mohr (*Therap. Monatsh.*) reports a case of stricture of the left parotid duct following a lacerated wound of the left cheek, which extended from the outer canthus of the eye to the angle of the jaw. This was relieved by operation, but repeatedly closed up in spite of systematic dilatation with sounds. Subcutaneous in-

jections of thiosinamin were then begun in connection with the dilatations. A ten per cent. aqueous solution with twenty per cent. of glycerin was employed, of which one cc. at a dose was injected in distant parts of the body. Eleven injections were made in the course of four weeks. Five injections of 1-4 cc., of the solution were also made in the immediate neighborhood of the stricture. In the third week the stricture became less firm, and at the end of the fourth week it had yielded to such an extent that no retention of fluid occurred, although dilatation had been discontinued. No recurrence had taken place two and one-half months later.

The author considers thiosinamin a valuable adjunct to mechanical or operative measures for the relief of stricture in that it in time materially softens the scar-tissue, often makes effective otherwise unsuccessful treatment, undoubtedly hastens recovery and tends to prevent recurrences.

Turpentine is found effective by Smith (*Brit. Med. Jour.*) for young infants bottle fed and even also breast fed who suffer from flatulence and colic, such as may possibly occasion convulsions; in such cases minute doses of turpentine together with a few drops of castor oil are given. The kidney and the bowels are both affected. One minim of the rectified oil is rubbed up with 3 minims of castor oil and 2 grains of gum tragacanth and the whole made up to a teaspoonful with water for an infant of eight months, is given every four hours. We may disguise this dose by adding to 1 dram of the liquid extract of liquorice, 5 drops of the oil of cloves and 20 drops of spirits of chloroform. If the paroxysms of colic are severe codein gr. 1-30 may be added.

The Bactericidal Power of Living Cells.

A. Albergo-Berretta, after experiments on animals by injections of emulsions of bacteria to ascertain the power of the living cells to destroy bacterial life, gives us the following conclusions: That the uninjured tissues as long as they preserve their vital properties are able to destroy rapidly all micro-organisms that come immediately in contact with them. The micro-organisms only find a condition adapted to their action in the presence of injuries to the tissues, or in conditions in which their vitality is lowered. In this destruction the phagocytes take an important part, but they are not the only factor in this destruction of germs. There are substances already contained in the protoplasm of the tissues which kill the germs, and all cells have the power of elaborating such substances when they are needed.—*La Sperimentale*, Aug., 1908.

Clinical

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Notes

Clinical Notes on the Use of Staphylococcus Vaccines.

I desire to report the following clinical notes on three cases treated with polyvalent Stock Staphylococcus Vaccine (Aureus) as a contribution to the literature on the subject, showing that many cases which ordinarily would not be treated by vaccine therapy because of the difficulty of preparing a personal vaccine and determining the opsonic index may be successfully treated by using a Polyvalent Stock Vaccine with the opsonic index, using the clinical symptoms as a guide. Well realizing that the series is too small to admit of definite conclusions, the results were good and seem to be sufficiently interesting to warrant publication for the information of the profession.

Case Histories.

CASE 1.—Mr. W. S., age 49. General health good. Heart and lungs negative. Urine negative. Successive furuncles on back of neck for five months. Some dessicated, others opened spontaneously, others attained great size and were lanced. After treating several of these surgically, gave, with an interval of three days, two injections of Staph. Aureus Vaccine (P. D. & Co.). There were no more furuncles after this. Patient has been under observation for eight months since. There has been no recurrence.

CASE 2.—Mr. W. C., age 39. Contracted

syphilis eighteen months ago. Under active treatment constantly. Six weeks ago, while traveling, began to have carbuncles and furuncles on neck and face. Three weeks ago came under observation again. Treated the most active furuncles surgically and injected Staph. Aureus Vaccine (P. D. & Co.). No new furuncles appeared after the injection. His skin is now clear.

CASE 3.—Mrs. T. B., age 41. Diabetic. Urine free from sugar or showing only slight trace while dieting. Ten months ago, came under treatment for a series of furuncles on arm. For several weeks treated these surgically. Eight "boils" appeared during this time. Injected Staph. Aureus Vaccine (P. D. & Co.). No furuncles appeared after the injection. There have been none since.

The dosage of the Vaccines (P. D. & Co.) was 400 million at each injection; the administration was effected by an ordinary hypodermic syringe, the injections being under the skin and not deep into the tissues.—Isadore L. Hill, M. D., 616 Madison Ave., New York, N. Y.

Catheterization.

Cystitis has been found so often to follow not only a foul catheter but careless catheterism, that it is important to employ the most careful asepsis in the preparation of the patient, instruments and the operator's

RESISTING FORCE. The treatment, control and cure of tuberculosis, especially in the incipient stage, is generally conceded to be a matter of rest, fresh air, sunshine and proper diet. Oftimes—a patient needs help,—to keep up body warmth and supply new—resisting force—to the blood.

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hands. And if the patient should essay to catheterize himself the above precautions should be enjoined upon him. After catheterization it is well to instill a few drops of a 1-1000 solution of silver nitrate to the trigonum and throughout the urethra, and to administer by mouth sanmetto in teaspoonful doses, in a half wine-glass of warm water every two hours.

Treatment of Chorea.—Burnet (Brit. Jour. Child. Dis.) states that if we admit that chorea is of rheumatic origin, we must have our treatment on this assumption. The objections to the use of arsenic he states as follows: 1. Large doses have to be given, and these may induce neuritis. 2. The results achieved are rarely permanent. 3. Arsenic exercises no influence over the complications and sequelæ of chorea. 4. It does not benefit in any way the rheumatic constitution of the patient. He favors the use of acetosalicylic acid in doses rarely exceeding thirty grains a day. It should not be given with alkalies, but preferably in lemon-water. Rest in bed is most important. Milk diet is preferable, but may be supplemented with milk puddings, stewed fruit, chicken soup, fish and chicken. Massage is valuable. Constipation must be avoided. The salicylates must be given in small doses morning and evening for at least a month or six weeks after being allowed out of bed. Return to school should

not be permitted within at least three months. A change to the seaside is advisable. A recurrence of rheumatism is liable to occur at any time.

Hypertrophic, Nonulcerating Tuberculosis of the Vulva.—Boursier (Jour. de Med. de Bordeaux) states that primary tuberculosis of the vulva is very rare. This tuberculosis may be ulcerative, or ulcero-hypertrophic, or hypertrophic without ulceration. Five cases of the last variety have been reported, one by the author. In his case the patient was very cachectic, having genital and pulmonary tuberculosis, with an epithelioma of the cervix which had involved the bladder. The diagnosis of the vulvar condition was elephantiasis, and in all the reported cases the correct diagnosis has been made only after operation or at the autopsy. In all the cases the glands, and the epithelial investment of the tumor were unaffected. The connective tissue was edematous, and its vascularity increased. Some tuberculous follicles were found among this connective tissue, disseminated and in relatively small numbers. In two cases the bacillus of Koch was looked for and found in small numbers. In the others it was not looked for.

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Purulent Pleurisy in the New-born.—

Devraigne (Bull. de la Soc. d'Obst. de Paris) says that purulent pleurisy in the new-born infant is not as infrequent as has been believed, owing to the fact of its non-recognition in the young child. The infant is unable to cough, and there are many other conditions that would account for the fever, vomiting and possible convulsions that accompany this disturbance. He mentions the history of a child which soon after birth developed this trouble and it became necessary to open the chest and evacuate a considerable quantity of pus, containing streptococci and staphylococci, in order to bring about a cure. In most cases this condition

is diagnosed on the postmortem table. Pleurisy in the new-born is generally purulent but the infection is usually simple, not a mixed infection. The patient has a pale, almost icteric tint, fever is variable, but dyspnea is marked. Respiration is short, the abdomen dilates, while the thorax is fixed, and expiration is accompanied by a sort of plaintive cry or groan. One of the chief physical signs is a complete immobility of one side of the thorax; dullness is marked, and there is a feeling of resistance to the percussing finger. The prognosis in such cases is more grave, the younger the child is. Treatment demands opening of the thorax with or without resection of the ribs.

The Influence of Diet Upon Breast-Feeding.

Weissmann (Deutsch. Aerzte-Zeitung, Dec., 1907), found from experience that in many women the deficiency in breast milk was due to insufficient or improper diet. If the mother is to nurse her child the pregnant woman must be properly fed; it is useless waiting till after the confinement. He sought for some cheap artificial food that expectant mothers of the badly-off classes might use, and one that did not require elaborate preparation. Maltropin (Malztropin) gave him such excellent results in four cases that he considers it desirable that it should be tried on a larger scale. Three of the mothers were multipara who had been obliged to give up nursing their other infants by reason of the absolute stoppage of the breast-milk. In these cases the breasts were lightly massaged; four tablespoonfuls of malt-tropin were given daily in water or milk. The food is continued after parturition. The fourth case is a primipara whose milk secretion ceased a few days after the lying-in. Under the same treatment in three weeks the mother was able to nurse her child and to give up all artificial feeding.—Brit. Journ. Children's Dis.)

Red Light Treatment of Scarlatina.

The effect of excluding all but the red rays of light has been investigated in many diseases. It is claimed that in smallpox, erysipelas, and eczema the cutaneous manifestations are lessened by excluding all but the red rays. Cnopf has recently tested the effect of the red light treatment on scarlatina, and finds that this disease, too, is altered by it. His observations were carried out on a limited number of children. As soon as the patients were admitted to hospital they were placed in special rooms, in which red curtains allowed only red rays to pass through. He claims that as a result the fall of temperature occurred sooner and in a more critical fashion than in cases similarly treated with ordinary daylight. The redness of the skin becomes less marked under the influence of the red rays, but the pathological change in the skin is not cut short, since exposure to white light brings out the rash again.—Munchen. med. Wchnschr.

The Occurrence of Scarlatina After Operations.

Dr. Kredel who is attached to a pediatric hospital, has noted that during an epidemic of scarlatina children who had passed through a severe operation were most liable to be attacked. In some instances the ex-

anthem started from the wound, so that it is reasonable to conclude that the infection occurred at this place, the more so as angina was frequently absent. He therefore believes that it is possible by resorting to stringent antiseptic precautions during an epidemic to prevent such scarlatinal infections.—Archives of Klin. Chirurg.

Liquor Hydrargyri Perchloridi in Treatment of Diarrhoea.

Dr. Faichnie speaks very highly of the use of liquor hydrargyri perchloridi in diarrhoea. He states that this drug was found an exceedingly valuable medicine during the South African War, when diarrhoea was a very common complaint.

Liquor hydrargyri perchloridi is described as an intestinal disinfectant, and combined with chlorodyne seems to remove the cause as well as the symptoms of diarrhoea.

Its use is well known, and his reason for bringing it forward now is that when in charge of two sections of a British Field Hospital, during the late Molmand expedition he was unable to administer it for a time, when diarrhoea was prevalent, as it is not provided in the panniers. As a substitute, however, he used the following, which acted equally well, viz., one tablet of the perchloride of mercury supplied as an antiseptic, containing 8.75 grains of hydrargyri perchloridum, dissolved in 17½ ounces of water, which gave a mixture containing 1-18 grain in one fluid drachm, the same strength as the B. P. preparation. The blue color of the tablet, due to an aniline dye, is quite harmless.—Journal of the Royal Army Medical Corps.

Sodium Cinnamate in Tuberculosis.

Drs. Peynier and Bluson state that they think that sodium cinnamate has beneficial results in tuberculosis. They report twenty-one cases of pulmonary and external tuberculosis in which this drug has been given a thorough trial. In ten cases the bacilli vanished from the sputum and the stethoscope showed approximately normal conditions out of the nineteen patients who showed the most benefit. Their experience seems to suggest that this drug combines with the toxins engendered by the bacilli, transforming them into non-toxic compounds. Favorable voices have been raised here and there since Launderer first proclaimed the efficiency of sodium cinnamate, and it has been successfully used in Spain, but Reynier asserts that it has not been given generally the attention it deserves. He prefers to give this drug in subcutaneous or intramuscular injections, up to the maximum of 0.3 to 0.4 gm. (from 4.5 to 6 gr.)

in two days. His patients were mostly adults.—Bull. de l'Academie de Medecine, Paris.

Treatment of Hypertrophied Prostate.

Dr. Hilderbrandt maintains that enlargement of the prostate is amenable to simple hygienic and dietetic measures. He thinks that the hypertrophy is a tumor growth and, therefore, the causes which promote the enlargement should be avoided. The patient should not ingest large quantities of water or drink any alcoholic beverage, and he should avoid chills and long journeys. However, the patient should take light food, mild exercise, warm baths and rubs as often as he can, and he should keep his abdomen constantly warm. The patient should urinate at the least desire, walking about a little if urination is difficult. Hot sitz baths will frequently bring the urine when all other means have failed. He regards regular aseptic catheterization as the normal method of treating hypertrophy of the prostate, operating only when this proves impracticable, and then removing the entire gland. If the patient is unable to stand this, he does a cystotomy.—Thera. Monatshefte, Berlin.

Treatment of Old Fracture of the Patella.

Dr. J. Rolter describes a very advantageous method in operating upon a fractured patella. His patient was a woman aged 37 years, who had fractured her right patella eight years previously. Satisfactory union took place, but some eleven weeks after the accident she met with a second slight accident, and separated the newly-united fragments. Although no union took place after the second accident, she was able to walk fairly well. A year ago she fell and fractured her left patella. The right patella on examination was found to be broken in two at the junction of the upper quarter and lower three quarters. There was an interval of two inches between the fragments. The leg could not be fully extended. The fragments of the left patella lay some $2\frac{1}{4}$ inches apart, and the upper fragment only measured $\frac{1}{2}$ inch. The function of the left leg was less good than that of the right. She could only extend the leg to half a right angle. She could walk with a stick, but could not walk upstairs.

Dr. Rolter first extended the quadriceps by means of a strip of strapping and weight. On removing it for the operation, he found that the extension produced by the strapping had again disappeared, and that it was impossible to bring the fragments of the left patella together. He therefore excised the scar tissue and applied a silver-wire suture

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J. S. TYREE, Chemist, Washington, D.C.

to the patella, and found that there was still about one inch of separation. He then dissected a strip of the aponeurosis of the muscle, measuring about $1\frac{3}{4}$ inches, by nearly 3 inches, leaving an attachment below at the upper fragment. Muscle fibres were intentionally left on the under surface of the aponeurosis strip. This was turned downward in such a way that the muscular surface lay over the patella fragments and it was sutured by numerous catgut sutures to the fragments.—Calcutta Medical Journal.

Cystitis.

In the treatment of all cases, rest in bed, with the hips elevated, will often give more or less relief from the strangury and the constant desire to urinate; by elevating the hips the urine accumulating in the bladder flows away from the most congested and sensitive part of the bladder. Some recommend opium and belladonna to control the pain. Heat to the perineum and above the pubis, and hot sitz baths will greatly relieve the tenesmus, and to some extent lessen the congestion of the mucous membrane of bladder. Sanmetto should be freely given, each dose in half wine-glass of hot water, and if the urine is acid potassium citrate will render the urine less irritating.

Miscellaneous.

New Subscribers for March.

Dr. M. Val Robinson, 273 E. 35th street, Chicago, Ill.

Dr. Wm. Gaylor, Jellico, Tenn.

Dr. L. M. Scott, Jellico, Tenn.

Dr. Thos. H. Hammond, Oxford, Fla.

Dr. H. M. Boswell, Stille, La.

Dr. Jas. A. Anderson, McAdenville, N.C.

Dr. J. H. Frye, Danville, Ky.

Dr. A. L. May, Danville, Ky.

Dr. G. G. Thornton, Lebanon, Ky.

Dr. B. F. Jones, Danville, Ky.

Dr. W. L. Kirkpatrick, Pacolet, S. C.

Treatment of Arterial Sclerosis.

Dr. Gouget reports favorable results on his views of treating calcareous arteries. Since increased tension is the chief cause of this affection, the usual aim is to do away with this underlying cause. The author recommends the iodides as the most valuable drugs to combat this disease. He prefers potassium iodide better than sodium iodide, since the former is more resolvent than the latter. Of course, no method of treatment can restore arteries which have become calcareous; but in the initial stage the process may be arrested by potassium iodide, and the solvent action of potassium may be combined with the tension-lowering effect of sodium, by giving both salts simultaneously or alternately; 3 to 7 grains of potassium iodide and 50 to 20 grains of sodium iodide may be given in twenty-four hours. They should be administered during meals, two or three times a day, freely diluted with water and combined with some alkali, on account of the tendency of acid drinks to liberate iodine, and so cause gastric disturbance. If the drugs are badly borne, opium or belladonna may be combined with them. Symptomatic treatment must be directed against cardiac, renal and cerebral complications, and, above all, against pain.

For alleviation of the pain, the author recommends morphine and atropine.

The patients should be allowed a mixed diet, except shell-fish, "high" game, smoked or salted fish and meat, pork and such foods which contain toxins which cause vascular constriction and in this manner produce a high tension. The evening meal should be light and the patient is permitted to eat fresh meats, fish, eggs, milk, vegetables, ripe and cooked fruits. He should partake sparingly of food and should not ingest considerable fluids, in order that he may not overload his vascular system.

Another important point is that the patient should avoid excesses of all kinds, even intellectual and moral exertions and high living of every description, tobacco, alcohol and lead poisoning being especially injurious to them.—British Medical Journal.

Acute Prostatitis.

In the treatment of acute prostatitis salicylic acid internally in five-grain doses and sanmetto in teaspoonful doses tends to diminish the source of infection, reduce the existing inflammation and encourage resolution. The sanmetto being a mild, soothing resolvent diuretic, also tends to allay the suffering of patient. If the urine is acid, citrate of potassium in ten-grain doses will aid in relieving irritation and tenesmus. As further measures for reducing inflammation, light diet, absolute rest in bed, free movement of the bowels and local application of heat by means of sitz baths, or hot-water bag, should be enjoined. If the sanmetto is kept up urinary retention is not likely to supervene, unless there is a previously hypertrophied prostate; in that case the bladder should be emptied by a soft catheter at intervals, still keeping up the use of sanmetto. The prostate should not be massaged during the inflammatory state, but during the period of resolution massage will aid the process.

Rupture of Uterus.

Kerr says that while it is true that rupture of the uterus is ordinarily a disgrace to the obstetric art, there are exceptions, and it may occur even during pregnancy. He discusses rupture during pregnancy and after protracted labor, and then rupture during early labor, which he regards as holding etiologically a middle point between the two others. He further discusses the varieties of rupture, symptomatology and diagnosis, and prognosis—which last, he says, is much more favorable today than when the condition was treated expectantly. Finally he deals with the treatment, both prophylactic and active. He especially warns the accoucheur against the danger of performing vaginal operations, such as turning, etc., with the woman only partially anesthetized.—London Journal of Obstetrics and Gynecology.

Hypertrophy of the prostate with urinary blockage is a relatively common condition. These patients should be constantly under their physician's observation and advice. They should be warned of the complications and familiarized with the importance of aseptic precautions, and in the use of sanmetto to avoid the establishment of catheter life.

The Charlotte Medical Journal.

VOL. LIX

CHARLOTTE, N. C., APRIL, 1909.

No. 4

Chronic Gonorrheal Seminal Vesiculitis, Synonyms Gonocystitis, Chronic Indurated Vesicle, &c.

By Albert D. Parrott, M. D., Kinston, N. C.

There is no disease in the whole domain of medicine and its allied branches, that the general practitioner treats, or one with which he is so absolutely unfamiliar, as the subject of this article. And there is no disease whose treatment is so utterly disappointing, none which requires more patience and perseverance, on part of both patient and physician, and none more disastrous in its ultimate results, than is Seminal Vesiculitis. I am now dealing with the chronic gonorrheal form and purposely omitting the simple; tubercular, and traumatic forms, they being comparatively rare.

Anatomy.—The Seminal Vesicles are two lobulated membranous pouches placed behind the base of the bladder and the rectum, serving as reservoirs for the semen, and manufacturing a fluid which is incorporated with that secreted by the end testicles. Each vesicle is somewhat pyramidal in shape, the broad end being directed backward, and the narrow end forward toward the prostate. They measure about two and a half inches in length, about five lines in breadth, and two or three lines in thickness. They vary greatly in different individuals. Their upper surface is in contact with the base of the bladder, extending from near the termination of the ureters to the base of the prostate gland. Their under surface rests upon the rectum from which they are separated by the recto-vesical fascia, and which is of great importance as an etiological factor in the production of disease. The posterior extremities diverge from each other. Their anterior extremities are pointed and converge toward the base of the prostate where each joins the corresponding vas deferens to form the ejaculatory duct. Each vesicle consists of a single tube coiled upon itself, and giving off several irregular diverticula, being connected together by fibrous tissue. It terminates posteriorly in a cul-de-sac; its anterior extremity becomes constricted into a narrow straight duct which joins with the corresponding vas deferens and forms the ejaculatory duct. The ejaculatory ducts are two in number, one on each side. Each duct is about three-quarters of an inch in length; it commences at the base of the prostate and runs forward and downward, behind its middle and lateral lobes, and along the side of the sinus pularis, to terminate by a

separate slit-like orifice close to the margins of the sinus. Their blood-supply is from the middle hæmorrhoidal, inferior vesical, and middle vesical. The nerves are derived from the pelvic plexus. So much for their anatomical structure.

Pathology.—Generally speaking chronic seminal vesiculitis presents itself in two forms.

1. *Atonic Vesiculitis.*—In this condition there is only lost tone of the muscular fibres composing the walls of the vesicle.

2. *Inflammatory Vesiculitis.*—In which the walls are thickened and indurated, incident to the inflammation. Each variety of vesiculitis may exist by itself, but there is a combination of atony and inflammation of the wall of the vesicle. In the atonic variety the muscular fibres become exhausted, lose their tone, and the walls of the vesicle become thinned, atonied and overstretched: The cavities become distended with semen, because the weakened muscular fibres are no longer able to evacuate their contents, and the secretion becomes thick and inspissated, approaching very much the character of a concretion. To the examining finger the vesicles feel larger, and in fact are swollen. The expression urine is far from being clear, and the vesicular contents appear as coagulated masses of gelatinous material. These particles sometimes resemble casts, which shape they attain by being driven through the ejaculatory ducts during the act of stripping. After a varying length of time the old atonied vesicle is almost invariably attacked by some germ, most often the bacillus coli, from the rectum and immediately inflammatory changes supervene, thus giving rise to

(a) *Chronic inflammation*, without peri-vesiculitis (Morton).

(b) *Chronic inflammation with peri-vesiculitis.*

In the absence of peri-vesiculitis inflammatory infiltration or hyperplasia of the connective tissue around the vesicles is rare. The vesicle is generally found enlarged, with its walls thinned and atonied, much sclerosed by fibrous changes which nearly always occurs in this variety, within the walls.

When peri-vesiculitis is present, there is always a small round cell infiltration which surrounds and involves the vesicle. This takes place in the early stages. Ultimately this infiltration becomes organized with fibrous connective tissue with adhesions,

producing angulation, and binds the vesicles firmly to the base of the bladder. In this condition when palpated per rectum, the vesicle is often mistaken for part of the prostate. Here as elsewhere after the fibrous tissue has existed sometime it begins to contract and in consequence the vesicles are squeezed upon and become smaller than normal. How resourceful is Nature? Is it not wonderful that these crippled glands are able in any wise to perform their function?

Etiology.—This disease is produced, of course, by the implantation and proliferation of the gonococcus of Neisser.

Diagnosis.—Chronic gonorrheal seminal vesiculitis is chiefly to be diagnosed from the *simple* and *tubercular* varieties.

In the simple form there is no history of an gonorrheal infection, these symptoms are vague and indefinite, quite evanescent, in fact many observers doubt the existence of a simple or idiopathic variety. It is distinguished from the tubercular form by the history of gonorrheal infection or presence of gleet discharge, although there may be discharge in the tubercular form. The history of tuberculosis in the family or elsewhere in the body, tuberculosis of adnexa, the cachexia, and lastly, what is more certain, the finding of the bacillus of Koch in the expression urine.

Symptoms.—The symptoms depend chiefly upon the accompanying posterior urethritis, and consist in frequent urination and spasm, or irritability of the cut-off muscle. On straining at stool the glairy, sticky discharge escapes from the meatus, which is the secretion expressed from the prostatic crypt by the muscular effort, and is usually called *prostatorrhoea*. The mental symptoms in my experience are very prominent, and consist in depression of spirits, almost approaching melancholia, there is sometimes marked irritability of the temper and quarrelsomeness. Hypochondria plays an important role in the symptomatology. They often complain of the penis being flabby, and cold, or numb, the testicle retracted, etc. It is in this condition that the quacks get in their work, and prey upon their alarm and deluded ignorance. In its early stages there is an increase in the sexual desire, accompanied by nocturnal emissions, which are often chocolate colored, from admixture of blood. As the disease progresses there is a progressive loss of function, and finally a condition of true impotence is established. It has often been said that few physicians practice with seriousness. This is in a great measure true. There are few doctors that give a chronic gleet discharge the attention demanded. There is vastly more harm done by not taking the trouble to examine, than there is

from sheer ignorance. I believe that every case of gonorrhea of eight weeks duration has infected the seminal vesicles, and the prostatic crypts. I am also convinced that it is impossible for one to have prostatitis without involvement of the seminal vesicles. One has only to recall his anatomy to see and feel the truthfulness of this statement. This is not a transient, or fleeting idea, but has been made only after much forethought. Thus to cure one we have to treat both, and *vice versa*. An infected prostate, or posterior urethra will always infect seminal vesicles and Cowper's glands. An infected vesicle will infect the prostate. Of course the prostate is usually infected first.

Treatment.—Every gleet discharge coming under our observation should always be studied with a vast amount of care, as to duration, past and present symptoms, treatments instituted, etc. After eliciting all possible information by questioning, then examine the vesicles with finger per rectum. In doing this the patient should always assume the leap-frog attitude. The treatment consists in stripping or expressing the contents of the vesicles once every five to seven days. The effects of stripping are to expel from the vesicles their inspissated contents without forcing the muscular element to contract and eject the semen, and through the rest thus afforded them, the vesicles recover their tone. Of course there are several contraindications to massage. (1) *an acute vesiculitis*, (2) *presence of blood*, (3) *exquisite tenderness*. When the above mentioned conditions are present there is always danger of provoking an attack of orchitis or epididymo-orchitis. The urethra should be properly treated by irrigation, instillations; isolated foci are to be touched with silver nitrate through the endoscope. The passage of cold sterile sounds is especially efficacious in this chronic condition. Whilst I am carrying out this routine I usually prescribe potassium iodide in ten grain doses three times a day, generally using as a vehicle the ext. saw-palmetto comp., tritium uvivura. The iodide of potash given at this juncture and in the above mentioned dose seems to exercise remarkable alterative and absorbent powers. Aiding materially in reducing the size of both prostate and seminal vesicles and restoring them to their normal condition.

A New Sign of Pregnancy.†

By Richard N. Duffy, A. B., M. D.

Pregnancy is in the majority of cases an easily recognizable condition but occasionally one is confronted with a case in which it is very difficult to decide whether or not

† Wiener Klinische Wochenschrift, No. 7, 1908.

a conception is present. It has happened unfortunately many times that a pregnant woman has had her abdomen opened for the removal of a supposed ovarian or uterine tumor. It is in these borderline cases that one needs all possible data before rendering his decision. The failure to diagnose an existing pregnancy is, to say the least, an extremely mortifying mistake.

Hertzl has recently called attention to a new sign of pregnancy, reported by Halban, which may prove useful in some of these difficult cases. This consists in *Hypertrichosis*. It manifests itself not only by an abundant growth of hair in the regions of the body ordinarily so covered, but by its development in unusual situations and by the development of lanugo hair over the remainder of the body.

I have seen a case in which this condition is especially well marked. There is in this case, a primipara aged 26 years, a much more abundant growth of hair in the usual situations. In addition, there is quite a marked growth extending from the symphysis pubis to the Xiphoid along the linea alba. This particular growth seems in this case have taken the place of the pigmentation which is so often seen in pregnancy along this line. There is also quite a marked growth of hair on the face, several long hairs being evident about the chin. The patient states that the presence of hair in both of the above mentioned situations has only become evident in her since the onset of pregnancy. The entire body has also recently become covered with a well marked growth of lanugo hairs.

This hypertrichosis develops early in pregnancy and is very well marked by the third month. It is supposed to result from the direct action of the placental substances as there is reason to believe that these substances may stimulate the growth of hair when administered to animals in the non-pregnant condition, Hertzl having gotten well marked increase of growth in non-pregnant dogs after the injection or placental extracts.

The condition is an extremely interesting one and it is hoped that this report may elad to further observations on the subject.

A Plea for the Virginia Consumptive*

By R. H. Garthright, M. D., Vinton, Va.

We know that a ruinous disease is running rampant throughout the habitable globe, and that it has laid low in death more people than have all the wars named in history since the armies of the four kings joined battle with those of the five in the vale of Siddim.

*Read before recent meeting of the Virginia State Medical Association.

This loathsome malady thrusts its deadly fangs into the vitals of the inhabitants of every land and every clime. War slays its thousands, but tuberculosis its ten thousands!

To be gathered in the autumn of life "like a ripe shock of corn" with life's duty done, is "a consummation devoutly to be wished"; but the "reaper whose name is Death" is continuously swinging his keen and glittering scythe and gathering sheaves long before they are ready for the harvest. Consumption respects no age or class, but most of its victims are the young, who are filled with the joy of living.

It is dreadful in the extreme to see the young man, busy in preparing himself for life's conflict, or the beautiful maiden—the pride and joy of the home—with elastic step and lovely form, grow pale and weak, and sink into the eternal sleep.

The average man has no conception of the magnitude of the slaughter wrought by the tubercular bacilli. He will open his eyes in wonder, when we tell him that more than *eight millions* of the living today will die of tuberculosis; that in our own land there are one million sufferers from this disease, that in Virginia alone we have twenty thousand consumptives, with an annual death rate of five thousand, or fourteen deaths every day; that every hour and forty minutes, in every day, of every year, somebody within the confines of the "Old Dominion" dies of tuberculosis.

It is appalling! When a preventable and curable disease is allowed year after year to carry five thousand Virginians to the graveyards, it shows that something is radically wrong.

Shall we permit the tubercular bacilli to invade and destroy our bodies, and thus demonstrate that they are still our superiors and conquerors? Must these infinitesimal, but powerful and pestiferous organisms continue to prove mightier than we?

On the subject of successfully combatting this disease we need more light, but with the knowledge the profession possesses concerning tuberculosis today, *greater* things can, and should be done for our people.

Because for centuries *doctors* thought tuberculosis non-contagious and incurable, and so taught the public, it should not surprise us that the *people* are slow to believe in and accept modern methods of prevention and cure. Men are slow to appropriate new ideas. It is evident that the people as a whole have not grasped the fact that consumption is contagious, preventable, and in many instances curable.

To eradicate this fallacy from the public mind is one of the problems confronting us. The task of getting this matter before the

public in such a way as to bear fruit will be no easy one, but the great body of earnest medical men of Virginia who have begun the crusade against tuberculosis in the State have no thought of failure. To elicit the interest of the public on a question with which it is only partially acquainted is a stupendous undertaking.

When an *individual* exposes himself to danger to rescue another, he is counted a hero, but when another individual endeavors to reform an evil that affects countless human lives, he will receive meagre support and encouragement from the masses. Ruskin expresses the idea forcibly when he says: "Human nature is kind and generous, but it is narrow and blind and can only with difficulty conceive anything but what it immediately sees and feels. People would instantly care for others as well as themselves, if only they could imagine others as well as themselves. Let a child fall into a river before the roughest man's eyes he will usually do what he can to get it out, even at a risk to himself, and all the town will triumph in the saving of one little life. Let the same man be shown that hundreds of children are dying of fever for want of some sanitary measures which will cause trouble to urge, and he will make no effort, and probably all the town would resist him if he did."

Now, in order to wage a successful warfare against tuberculosis in the State we need first to educate, convince, interest and enthuse the *people*. Without their cooperation and support we cannot succeed.

How can the public be aroused into action?

By organization.

The main factors to use in perfecting the organization are *men* and *money*—men possessing special qualifications for the work, and money to pay them for spreading abroad the principles which if observed will give health and prosperity to the masses.

In this fight medical men should lead. In every hamlet and county, in every ward of every city, there should be a band of intelligent, active citizens, with a physician at its head to instruct and to direct the movements. Let the doctor first convince the members of the local organization that consumption is preventable, then let these members go out among the people and tell them the cause of the disease and the methods of preventing its spread. Public lectures delivered by gifted and magnetic speakers, newspaper articles, and personal work are all indicated.

There are hundreds of important facts which the people need to learn on this sub-

ject, before we can expect the Legislature to appropriate the necessary funds.

The present statute law relative to the State's public health is a wonderful improvement over any laws hitherto enacted; but the \$40,000 annually appropriated is not sufficient. True, with this amount much can be done toward preventing the spread of contagious diseases. Now, since the most prevalent of all the preventable diseases is tuberculosis, would it not be wise, for a few years at least, to expend the major part of this appropriation in a campaign of education? When the people shall know the essential facts about tuberculosis may we not hope they will demand of their representatives in the General Assembly the necessary funds to put into operation the methods of preventing the spread of the disease? It is known that the \$40,000 comes practically out of the pockets of the Virginia physicians in the way of license taxes. If the doctors, a small percentage of the State's population contribute this much, would it not be right and proper for the other tax payers to *quadruple* this amount? Would they not count it a privilege to aid in the good work? Men have tried to figure in dollars and cents what would be saved to the State and country by preventing consumption, but in many instances they make the estimate entirely too small.

We are told that tuberculosis costs the State \$60,000,000 annually. A yearly appropriation of one or two hundred thousand dollars, seems formidable to the tax payers at first thought, but if properly expended it would in large measure check the ravages of tuberculosis. Sanatoria could be established and maintained, suitable literature sent into every household, lives would be saved, wealth and comfort would take the places of poverty and distress, and the money appropriated, in due time, return, *quadrupled*, into the coffers of the State.

Two hundred thousand dollars expended annually in this cause would doubtless in a short time reduce the death rate of tuberculosis at least fifty per cent. From a business standpoint it would be wise to spend this amount, or more, in order to save thirty million dollars (\$30,000,000).

While no specific for the "Great White Plague" has been discovered—while we are not as yet prepared to say to the very ill consumptive, "rise up and walk," we can show to those who under present conditions will surely contract the disease, and go down to their graves after months of weariness and suffering, how to avoid this experience, and for years enjoy the blessings of health.

Let us do all in our power to save our fellow Virginians from the consumptive's

doom. The work is a stupendous one, barriers high and strong, beyond which lies an ocean of difficulties confront us. but, having "taken arms *against* this sea of troubles," let us by continuous and strenuous "opposing, *end them.*"

A Report of Twenty-one Hundred and Thirty-three Cases of Pulmonary Tuberculosis Treated in the Asheville Climate from 1898 to January, 1907.[†]

By James A. Burroughs, M.D., Asheville, N. C.

At the Charleston meeting of the Tri-State in 1900, I presented to this Society a report of thirteen hundred and seventy-one cases of tuberculosis treated in the Asheville climate up to 1898; also a resume of ninety-six cases previously reported to the North Carolina State Society at Winston-Salem in 1896, which cases were treated in 1891 and 1892.

In this summary only cases will be reported from 1898 to January, 1907. My reason for this latter date is that no case of pulmonary tuberculosis should ever be reported as arrested or cured for at least two years after treatment has ceased. Cases reported as arrested or cured earlier than two years after treatment are unreliable and misleading, as I have heretofore stated before several medical bodies.

I have been specially requested to report this work by your secretary, Dr. J. Howell Way, as well as by a large number of medical men from all parts of the country, who have spent hours and even days in looking over my records and observing the technic of my work.

As these patients have been intrusted to my care by physicians from every State in the Union, the Provinces of Canada, England, Japan, South Africa, Cuba, Mexico and several of the South American Republics, it is nothing but reasonable and correct that an account of the work should be rendered for the careful consideration of the physicians, especially as this report shows conclusively that a very large per cent. of properly selected cases of tuberculosis treated in a rational manner in the right climate do become arrested or cured.

Just here I wish to state that my paper presented at the Charleston meeting in 1900—Thirteen Hundred and Seventy-one Cases of Tuberculosis Treated in the Asheville Climate—did not include the one hundred and twenty-three cases treated with tuberculin. At the time, I gave my reasons for not using tuberculin further as a curative measure, which were in substance simply that I did my patients no good but harm

instead with tuberculin. Drs. Knopf, Crile and other high authorities have since taken the same position. And they who are using tuberculin now are only using 1-100 of the strength that was used in 1892 and 1893 when I administered it.

Tuberculin is only admissible as a conjunctive test in doubtful or obscure cases of tuberculosis in man.

These one hundred and twenty-three cases treated with tuberculin in 1892 and 1893 seemed to be as promising as the other cases, but none of them are now living.

I had an assistant—the late Dr. John Hodges Drake—who told me that he was given tuberculin regularly for eighteen months. Two years after this treatment by tuberculin ceased, Dr. Drake stated to me that out of sixty-three patients, who were given tuberculin at the time he received it, only one other patient was living.¹

This report of twenty-one hundred and thirty-three cases does not include the cases formerly reported; neither does it give an analysis of the cases formerly treated; nor does it include patients who were taken on probation and treated for some thirty to sixty days, and then sent home or advised to try other climatic points, because there were no signs of improvement.

Some of these cases previously reported have died from other causes than tuberculosis, and some from the re-development of the trouble, and I have lost communication with many of them, still fifty-three per cent. of this number are yet living.

Of this twenty-one hundred and thirty-three cases, which have been treated during the last nine years in the Asheville climate, there are possibly eighteen hundred now living. This statement is made after the most painstaking care in research, and in inquiry as to results and as to the condition of subjects.

The first factor in treating tuberculosis is climate; the second, food; the third, intrapulmonary medication; and the fourth, internal medication.

By a suitable climate, I mean an atmosphere which is practically non-germ-laden, high and dry, a climate that is opposed to sepsis. Just such a climate as exists here and at four other points—so far as I know—on earth. This statement is made advisedly after experiments on small animals. And, in evidence of the foregoing statement, I will cite the fact that during the

¹ In my opinion tuberculin is of no value, except for diagnostic purposes in cattle or man, and has no place as a therapeutic remedy for the arrest of the disease in man, cattle, beast of any kind, or fowl. This statement is made after the most painstaking experiments and observations. This topic would make a paper of itself, with the information in my possession.

[†]Read before Tri-State Medical Society, Charleston, S. C.

last fifty days the veterinary surgeon of our State Board of Health has tested with tuberculin nine hundred dairy cows furnishing milk to Asheville. And only eighteen of the nine hundred cattle reacted to the tuberculin test. And each one of these eighteen cattle was not home bred, but imported. The home bred cattle did not respond to the tuberculin test. It is obvious that these eighteen cattle were tuberculous before shipment.

At this point it may be a little out of taste to mention the fact, but I shall suggest to the North Carolina State Board of Health that we shall pass a law by our State Legislature prohibiting the shipment of any cattle into North Carolina which have not immediately before shipment been tested for tuberculosis. A test six months prior to shipment does not satisfy men who think. A very recent test is what we want.²

It is very conclusive to me that there is a kind of electrolysis—or something which so far has not been explained—existing in this atmosphere, that is opposed to the life of tubercle bacilli. The records of much observation upon this subject could be produced, which are in my possession.

The aseptic condition of a rarefied atmosphere is of pre-eminent importance in arresting a tubercular process. Indeed, it is doubtful if pulmonary tuberculosis can be treated successfully in any other climate than one similar to that described.

From my earliest attention to the tuberculous, which dates back twenty-seven years, my patients have been practically kept in the fresh air by day and by night.

While the patients are in rooms at night during the winter, the windows are kept wide open at the top, except during the time of storm, and the heat is cut off from the rooms.

By day the patients are in the sun, resting upon the verandahs in reclining chairs or upon cots. And those who have ceased having fever are instructed to take trolley rides or carriage drives. While driving they are at times fully two thousand feet above our modest little village. With patients who are having fever, exercise is practically prohibited.

All patients, not excepting the hemor-

² It is an accepted fact that bovine and homo tuberculosis are practically one and the same.

There are points which I could give you regarding nodules in the lymphatics extending anterior to the spinal cords of fish feeding from sewers used by the tuberculous, which would convince you that the tubercle bacilli can be transmitted—provided that the fish is not thoroughly cooked—just as the typhoid bacillus can be transmitted to the human being. I have an abundance of data concerning observations upon this point by actual experience, the correctness of which can be demonstrated by any one having the time and the inclination.

rhagic cases, are instructed to take from one hundred and fifty to five hundred deep, full inhalations daily. This deep breathing is never to be practiced inside of four walls, but always at some point in the open air, upon the verandahs, or at the ends of car lines, where no dust is floating in the atmosphere.

This deep breathing dilates the collapsed air cells, gets more oxygen into the system, and reduces the bodily temperature.

The feeding of the tuberculous is of great importance. No matter where or under what conditions the tuberculous exist, the regime of diet should be observed, which should be subject to variation, according to the age of the patient and according to his digestive powers. The tuberculous should be instructed with the greatest care in regard to diet, so as to impress the patient in regard to the quality, quantity and character of preparation of every kind of food suggested.

The diet consists of cream, milk, eggs, beefsteak, breakfast strip, and butter and salt ad libitum on everything. Without going into detail, I will state that an average adult should take daily one pint of cream, one quart of milk, twelve raw eggs, a beefsteak twice daily weighing half a pound, several pieces of breakfast strip or bacon of mornings in addition to the beefsteak and not to the exclusion of the same, and two baked Irish potatoes as large as goose eggs, one potato in the morning and one at night. At the noon meal the patient should be permitted to eat roast beef, or any kind of game, poultry, fish, or anything else he wishes.

To tell a patient to eat a beefsteak twice a day is vague. He must be instructed as to quantity, quality and the manner of preparation. Fried beefsteak has no place in a tuberculous patient's stomach. The best cuts should be selected, fully one inch thick, and should be broiled a third on either side, leaving the middle rare, and should be served in a hot plate.

When eggs cannot be taken raw—which is rarely the case—the patient should be instructed to have them poached, soft boiled, or made into custards; but never fried.

The potatoes should be baked in their jackets in an oven at the right temperature, so that when cooked they will be light, dry and mealy. And they should be served immediately when sufficiently cooked. Then the potato should be removed from the jacket and well seasoned with butter and salt.

There is one point that I wish to express very emphatically, regardless of what physiologists say upon the subject of osmosis of the skin, and it is this: that my patients are

rubbed on retiring with pig's lard. They are presumed to absorb a portion of a pound each week, at least a pound is rubbed in. The rubbing helps the poor muscles. The lard protects the skin from the vicissitudes of the weather, and a goodly portion of it is undoubtedly absorbed.

Bear's grease is preferable to pig's lard, as it is certainly more easily taken up by the skin. At one time I obtained twenty-eight hundred pounds of bear's grease from Canada, but have only been able to obtain it in small quantities since.

After forced feeding in the right climate, intrapulmonary medication is the next adjunct of the greatest importance in the treatment of pulmonary phthisis. Indeed, I would not take a case of pulmonary tuberculosis under my care without administering intrapulmonary medication.

I have largely dropped the use of oil of cedar in intrapulmonary treatment. Indeed, I do not use so much of the pine oil products as I once did. Yet, I still use glymol as a basis. I also use camphor, in conjunction with the essential oils, when ulcerated bronchial glands exist. For a great many throat and bronchial ulcerations I have of late years used much Keener oil as a basis in preference to glymol, with the most excellent and satisfactory results.³

At this juncture there is one point which I wish to emphasize: when a tubercular uvula exists, it should be amputated; and when tubercular tonsils exist, they should be removed; and all ulcerated points in the throat should be touched with the solid stick of nitrate of silver; and the larynx, when indicated, with a twelve to fifteen per cent. solution of nitrate of silver. These tubercular ulcers of the throat should be touched every day or every other day until they are entirely healed; and should then be watched forever afterwards.

It must be remembered now and forever that nitrate of silver of a sufficient strength is the only thing known to the medical world which will arrest an ulcerated process of the throat. The other silver preparations have not proven so effective in my hands.

In giving intrapulmonary medication I formerly thought that from fifty to seventy pounds of pressure to the square inch was sufficient. After years of experience I feel differently, and think that from seventy to one hundred and ten pounds pressure to the square inch should be used in administering the intrapulmonary medication. It takes time and experience to give an intrapulmonary treatment to the best advantage to the patient.

3 This is an oil which is procured from between the gray sands on Mr. Keener's farm in Pennsylvania near Pittsburg. And, so far as I know, it is not on the market.

I use in a DeVilbiss spray about two ounces of glymol, ten to twelve drops of kreosote, possibly thirty drops of saturated camphor, ten to fifteen drops of saturated menthol, ten to fifteen drops of oil of pine needles, ten to fifteen drops of oil of eucalyptus, ten to fifteen drops of apinol and ten to fifteen drops of terebine, which is given daily by intrapulmonary medication.

I have had trouble in giving the foregoing combination in intrapulmonary medication in exceptional cases, which, as has been previously stated, may have a cumulative effect, producing strangury in old men, and symptoms of miscarriage or miscarriage in young women. These misfortunes have not occurred for several years; from the fact that I have been more guarded in such cases, because of unfortunate experiences.

Internal medication has consisted of kreosote, cod liver oil, peptonate of iron and manganese, strychnine and codein; using the codein only when necessary to check cough.

As a routine cod liver oil is given in one-half ounce doses three times daily, and to this cod liver oil is added by the patient or nurse from twenty to fifty drops of Morson's White Label kreosote. This amount of the foregoing kreosote never produces smoky urine. I have found, as have others, that a few stomachs do not tolerate the cod liver oil, or kreosote either; and in such instances I have given arsenic. I have frequently dropped the use of kreosote for a time and given arsenic instead with the cod liver oil, with good results. Arsenic when given as a substitute for kreosote is given to the point of toleration, and as a tissue builder; and not with a view to arrest the tubercular process, as with kreosote.

Peptonate of iron and manganese as put up by our best manufacturing pharmacists is given in tablespoonful doses every three to four hours in a wineglassful of water.

Strychnine sulphate in one-thirtieth grain doses three times a day strengthens the heart action, tones up the nervous system, and partially drives away nostalgia, which gives you many points towards health. Nostalgia is a physical condition which is very hard to combat. It requires the best cheer of the physician and every little courtesy and attention that can possibly be given to drive away that longing for home and friends.

All sedatives have been discarded, except in case of an impending hemorrhage or when a hemorrhage exists.

Alcoholics have their place in the treatment of this dreaded disease; but they should be used with reason and care, as they are only indicated in special cases. Not more

than eight or ten per cent. of my cases are permitted to use alcoholics. And these cases are under the direct care of a nurse, so that the patients are under control.

I will now give you a synopsis of these twenty-one hundred and thirty-three cases treated. There are sixteen hundred and nine of the number known to be living, and one hundred and seventeen cases known to have relapsed and died. Some of this number returned to me when suffering relapse after having been discharged with the trouble apparently arrested; but the majority went to other physicians. With the remaining four hundred and seven of the twenty-one hundred and thirty-three cases, I have been unable to obtain communication; but they possibly retain a smaller ratio as to recovery than the other cases reported, because they were less intelligent than the sixteen hundred and nine known to be living.

The average gain in weight of these apparently arrested cases was twenty and three-fourth pounds; the greatest gain was one hundred and nineteen pounds; the least was three and one-half pounds; and the aggregate gain was forty-four thousand one hundred and forty-seven pounds. The average gain in chest expansion was one and three-eighths inches.

Fellows, in submitting this report, I wish to state that the most painstaking records have been kept of these cases, which are an open chapter at my offices in Asheville to every physician who cares to look them over. The results of every examination made are recorded, and the names and post office addresses of the patients.

Of course all of the microscopical and analytical work of examining blood, sputum and urine has been done largely by my assistants, and also the greater part of the intrapulmonary medication has been administered by my assistants, who have been the late Drs. J. C. B. Justice, J. H. Drake and J. H. Reynolds. Dr. Hastings Wyman of Aiken, S. C., assisted me in this work one year. And latterly Dr. J. E. Cocke of Asheville, N. C., and Dr. O. F. Eckel of Edinburg, Ill., have assisted in this work.

Dr. C. V. Reynolds of Asheville, N. C., has been associated with me in my practice for years, and formerly did much of the microscopical and analytical work; since which time he has had charge of my patients and office force when I have been absent.

I wish to give due credit to these men, each one being competent, industrious and faithful, and each one taking a real interest in the work. Without their assistance I could never have accomplished what I have in the treatment of tuberculosis.

In conclusion, I will state that no case of

tuberculosis can be treated to the best advantage out of a good climate. And I wish to denounce the practice of States or municipalities treating tuberculous subjects, when they have not the proper climate within their borders.

And further, I wish to state that an abundance of fresh air by day and by night, forced feeding, intrapulmonary medication and internal medication as above described offer the tuberculous the best chance for an arrest or a cure.

This little paper is simply a continuation of the 1900 paper presented to this body just nine years ago, and I trust that it may be received as kindly.

Paranoia.[†]

By Beverley R. Tucker, M. D., Instructor in Nervous and Mental Diseases, Medical College of Virginia, Richmond, Virginia.

I decided to write this paper upon paranoia for several reasons. Many paranoiacs are not confined to asylums, although most of them should be, and the condition is but little understood by the general practitioner notwithstanding it is a distinct clinical entity. Moreover, the laity have gotten hold of the term and some have accused every one who does anything out of the usual routine, from the President down to Harry Thaw, of being paranoiacs. Another reason for choosing the subject is that paranoia is one of the most interesting of the psychoses, and an understanding of it will throw light on some of the queer characters we have run across, while the study of it will train us to follow a condition of mentality extending over a long period of years and following a systemized course through many varieties.

Paranoia has been called chronic delusional insanity, reasoning mania, progressive systematized insanity, etc. The word paranoia, meaning "beside the mind" has been in the past applied to various conditions marked by delusions and is at present used as "paranoid" in describing the more or less systematized delusions of other mental diseases. Paranoia is a chronic progressive psychosis on a basis of mental derangement, with systematized delusions and without marked mental deterioration.

Paranoia forms about two per cent. of the admissions to insane asylums, but is not of such rare occurrence as this might lead us to believe, because, as I have mentioned, many of the cases are not confined to institutions. We run across paranoiacs among the large classes known as cranks, chronic

[†]Read before the Richmond Academy of Medicine January 26, 1909.

grumblers, eccentrics, fanatics, etc., but all queer folk are not paranoiacs.

Paranoia, in my opinion, does not occur in normal individuals of normal heredity, but only appears upon a neuropathic basis and begins in early childhood, being rarely recognized, however, until adult life is attained. According to this idea it is practically a life long disease, beginning in its predelected subject and developing through various stages which shade into each other so insidiously that we can hardly mark off the transitions, and traveling along a hopeless road and creating trouble for its victims and others all the way to an end which may be either an arrest at or continuance of one of the stages, or marked insanity requiring confinement. Mental weakness comes toward the last.

These are the individuals who are the bane of the existence of officials and other public people. They are the men whose continual suits without substantial foundation first perplex and then annoy the courts, the promoters of a new religion, the lovers who follow actresses for years and shower them with erotic epistles, the inventors who have discovered a perpetual motion machine, the individuals who have a new system of government to foster, the motiveless murderers and the people who are always slighted, always persecuted, and against whom combines are working. If we take the past history of these individuals, as widely separated as their peculiarities are, we usually find them strikingly alike. If we study their present mental states we find a connecting link between them. If we watch their futures we learn that they all follow very much the same course.

Many things may tend to precipitate existing instability in these people, as tasks too great for the intellect, some shock or fright, some accident or transient illness, or business reverses, and the psychosis is subject to exacerbations, probably due to some inciting feature of the environment at the time, and periods of standstill occur, but soon or late the picture usually becomes complete with expansive delusions and often a change of personality.

Neurotic heredity and neuropathic or defective constitutional development are the foundations upon which paranoia is built. Berkley says he has never seen a case in which the history of hereditary drunkenness, family neuroses, or actual insanity could not be obtained. No pathological findings have been yet discovered for the disease, but many of the cases present various stigmata of degeneration.

A child is born and develops peculiarities as it grows. Boys are probably most frequently affected. These children are some-

what seclusive, often precocious in their studies, especially for certain subjects, and frequently ambitious beyond their cerebral calibre. As they develop they often tend to sexual perversions. They are sometimes the pets of their teachers and may form unusual attachments for some one person. At this period they can only be diagnosed as "candidates" for paranoia, but that these symptoms, although common to other conditions, form a period of paranoia is proven by the fact that the past histories of developed cases always date back to these peculiarities of childhood. The fond parent often looks upon a child of this character as the most promising, mistaking the precociousness for brain and the eccentricities for genius.

Time goes on and we find this youth entering manhood or womanhood wrongly equipped. They do not understand human nature, their lack of normal companionships, their irregular development and their accomplishments along certain lines tends to make them take an egotistical and distorted view of the world, and make them arrogant and hypersensitive. Although they are all intelligent to a degree, they attempt tasks beyond their intellectual power and become interested in projects or subjects in which they assume authorityship without first having mastered the fundamental principles. They become interested in politics, in religion, in inventions, in discoveries, or in people of prominent or high station. Never satisfied to stand "hands off" or accept conditions as they exist, they propose to change the government, to institute religious reform, to invent wonderful contrivances, to discover solutions to impossible problems or to marry or to associate with people of higher station. All of these ambitions, if they may be called such, are reasoned out upon a false hypothesis though often in a most plausible and persistent manner. At times they have large following among the credulous and the ignorant. They make political speeches, or become religious leaders of some new cult or sect and fool many. They are fond of writing and flood the papers with articles suggesting or demanding changes in existing institutions or air their views in pamphlets or books.

During this period reverses are often met with, their egotism is not satisfied, their friends shun them, and some shock or illness, some fancied or actual slight or grievance makes them suspicious and the delusions of persecution are engrafted. This usually happens between twenty-five and forty years of age and is not the beginning of the disease as some would have us believe.

Some one looks at them on the street as they pass and they think it is a glance of dislike, or if one turns the head away they are avoided, or they see people talking together and they imagine they are the subject of adverse criticism, or they hear a sermon or read an article which they think is directed at them. They think they are being shadowed, that cliques are being formed to annoy or destroy them. Some organization or secret society is planning their ruin and the circle ever widens until every one they meet is an accomplice. They appeal to authorities and present a mass of ingenious but not particularly logical evidence, frequently writing it out, sometimes with colored ink or pencils. Not infrequently these grievances are written and stuffed in their pockets without being delivered. Sometimes they are reticent in conversation but usually they present their difficulties in the most arrogant and aggrieved fashion. All of their ideas of persecution usually hark back to some real or supposed injustice.

These delusions of persecution are accompanied with imaginary attempts to injure them. Noxious fumes are being instilled through the keyholes of their doors at night, poisons are being put in their food, electricity is being used upon them, they are being put under some mystical influence, etc. Hallucinations of sight and sound are sometimes present and they see forms following them or disagreeable faces or hear voices plotting against them.

During this period they are retrospective, suspicious, arrogant, abusive, and dissatisfied with their surroundings. They often show but little affections for their families, in fact the members of the family are usually in the imaginary combine to ruin them personally or financially. They may go from one position to another because their enemies induce people in each new place to work against them. They sometimes travel from city to city, from continent to continent, but "the villain still pursues" and they can never rid themselves of the persecution. At times they commit the most senseless murders and slay men, women, and children whom they believe are plotting their ruin. Assaults are sometimes attempted upon physicians and asylum attendants. Outside of their delusions of persecution they are often sensible, able to carry on a business and to order their conduct so as not to attract attention. The fact that they believe themselves objects of intrigue and that extraordinary agents are concerned with them gradually leads them to think they must be people of especial importance and the delusions become grandiose. Are they not controlled by supernatural powers

or appointed by God for a special purpose? If so, are they not a part of the divinity? Many of the self-styled divine healers belong to this class, while some think they are appointed for governmental and political reformation. These delusions lead to the idea that they are the Christ or the Virgin Mary, or a prophet, or a king, or a multimillionaire. Thus a change in personality, exaggerated ego and expansive delusions mark this period. The persecution ideas still persist and their throne has been taken away, they suffer religious persecution, they are being cheated out of their wealth, etc. However, their lot is on the whole less dissatisfied. They often begin now to dress peculiarly and bedeck themselves with insignias of imaginary value. Toward the end mental deterioration is seen and they become more or less demented.

Throughout the disease they are able to subdue their symptoms for a short length of time, and it is not infrequent for them to deceive credulous people, newspapers, courts and even physicians untrained in mental diseases and to arouse pity and the belief that they are victims of persecution.

In the differential diagnosis between paranoia and other mental diseases, we will have but little difficulty, provided we have the condition in mind and can obtain through the family and friends as well as the patient, a complete past history of the case. Melancholia may present delusions of persecution but they are not systematized, the disease is more acute in onset, beginning, as a rule, after some illness or disappointment. Hallucinations are usually more marked in melancholia and the idea of unworthiness is present.

The condition chiefly of importance to distinguish from paranoia is dementia precox, especially what are known as the paranoid forms in which the delusions persist, sometimes for years, and though consciousness remains clear, there is evidence of deterioration. In one group of these cases the delusions may be of a persecutory and expansive nature, but they are very changeable and dementia progresses rapidly. In another group there are more or less systematized delusions but they are of a fantastic character and accompanied by many hallucinations. As time goes on they may disappear or dementia may cloud them. The delusions are sometimes persecutory in character. Dementia precox is marked by stereotypy, automatic movements, negativism and peculiar mannerism.

We should have but little difficulty in diagnosing mania from paranoia. In mania the patients are often egotistical, have hallucinations, and expansive delusions may be present. However, there is emotional

exhalation, an excelleration of the flow of ideas and motor agitation. There is no systemization, and there is a chaos of ideas which may make the patient laugh, sing and become profane in quick succession. As to the grandiose delusions, he may be a king, a millionaire and a deity in the same breath. Mania usually ends in recovery, dementia or death.

Treatment.—These patients should be under careful observation from the time a paranoiac condition is suspicioned and confined to an institution as soon as the delusion of persecution becomes annoying. They are dangerous because we never know when they attempt an assault. The disease is never cured, and in my opinion it can only be prevented in future generations by training and restraining neurotic children all through their lives and preventing marriage of this class to either normal or other abnormal individuals.

The disease may be mitigated to some extent by placing the patients in the best environment and not allowing them bad associates or tasks beyond their ability.

402 W. Grace St.

A Consideration of Some Intestinal Diseases Due to Metazoan Parasites.*

By W. Guy Hopkins, M.D., Richmond, Va., Director of the Microscopical Laboratory and Demonstrator of Pathology and Clinical Medicine, University College of Medicine; Pathologist to Virginia Hospital.

The most important many celled animals or metazoa, which produce internal disease in man may be divided into three classes: Flukes, tape worms and round worms.

Flukes are small, flattened worms consisting of one segment, from about $\frac{1}{4}$ to $1\frac{1}{4}$ inches in length. Man is infected with the larval form of this parasite either by mouth from polluted drinking water or, possibly, through the skin. The larvæ bore their way through the tissues, selecting different organs for their final location, so they are commonly classified according to the organ which they habitually infect, as liver flukes, lung flukes and blood flukes.

On reaching the organ of predilection the larvæ develop and the adult attaches itself to the tissues from which it derives its nourishment. The irritation produced by the parasite and its eggs (which are discharged in enormous numbers) gives rise to inflammatory reaction, and a highly vascular tissue grows around the infected area. This tissue is very friable and bleeds easily, and hemorrhage is a prominent symptom of all varieties of fluke infection.

Infection with the lung fluke (*parago-*

nimus westermanii) is known as parasitic hemoptysis. "The sputum in these cases contains blood which is always arterial, enormous numbers of the eggs of the parasite, pus, mucus, alveolar and bronchial cells, and Charcot-Leyden crystals." The patient has no fever, the symptoms being cough, hemoptysis and secondary anemia. The diagnosis is made by an examination of the unstained sputum for the eggs of the parasite which are oval and about 50 by 100 microns in size, slightly granular, with a distinct "lid" at one end.

The adult liver fluke (*opisthorchis sinensis*) inhabits the bile ducts and gives rise to cholangitis. The chief symptoms are jaundice, enlargement of the liver and bloody diarrhea. There is rarely fever, but the pressure on the inside of some of the blocked, inflamed bile ducts may, at times, cause excruciating pain. The diagnosis is made by a careful examination of the feces. The eggs are ovoid, larger at one end than at the other, about 16 by 26 microns in size, with a "lid" at the small end and a small spine at the other.

The blood fluke (*schistosomia haematobium*) inhabits the portal veins. In this infection the inflammation is caused entirely by the eggs of the parasite. These work their way from the abdominal veins into the tissues of the bladder and sigmoid flexure. Inflammatory reaction is set up in these localities and papillomatous growths are produced through which the ova make their way into the lumina of these organs. Hematuria is the most prominent symptom of the disease, the condition being commonly known as Egyptian hematuria. Other symptoms are pain and tenderness over the loins and pubes. When the sigmoid is involved, dysentery supervenes. Secondary anemia is proportionate to the amount of blood lost. The diagnosis is made by an examination of the urine for the eggs of the parasite. These are broad spindles, 60 by 140 microns in size, with a sharp spine at one end.

Flukes which habitually infect men are, as yet, rare in the United States. The lung and liver flukes are epidemic in Japan, China and Korea, and the blood fluke in Egypt. However, a considerable number of cases of each variety have been imported to this country, chiefly in immigrants. The writer saw a case of blood fluke infection in the Dispensary here in Richmond, in a veteran of the Boer war. This patient contracted the disease in Cairo. There is far more danger to the western part of the United States from the other fluke infections than on this side, owing to the large number of immigrants from Japan and China where the disease is epidemic.

*Read before the Richmond Academy of Medicine and Surgery, December 8, 1908.

Tape worms are peculiarly interesting on account of their complex biology. They all have a double life cycle. The mature segmented form inhabits the intestine of some animal, usually man. The eggs are produced while in this stage. These eggs have a hard, resisting shell, which is not soluble in the intestinal juices, but which is readily soluble in the gastric juice. When taken into the stomach of another animal the shell of the egg is dissolved and the embryo is liberated. The embryo is possessed of three pairs of hooklets, one central and two lateral pairs. The central pair is for boring, the lateral for tearing and propulsion. By means of these they make their way through the gastrointestinal walls and invade the muscles and other organs. Here the embryo develops into a cyst from which the larval forms are produced.

Three varieties of tape worm habitually infest the intestine of man in their mature form. These are the *taenia saginata*, the *taenia solium* and the *bothriocephalus latus*; and according to the animal in which the larval or cysticercous form develops, these worms are commonly called beef tape worm, pork tape worm and fish tape worm. It is the larval that is infectious for man. Infection takes place by eating the imperfectly cooked meat of the animal containing the larvae. The cyst wall is digested, and the liberated larvae, or scolex, as it is called in this stage, attaches itself to the intestinal wall by means of its suckers. Reproduction by budding now begins. The first segment is pushed further and further away from the scolex, or head, as others are formed behind it. In this way, a long colony, known as tape worm, is formed. Enormous numbers of eggs are produced by each segment, in which the embryo is formed before it leaves the uterus; and, as a rule, tape worm eggs may be distinguished from the eggs of other parasites by the hooklets of the embryos enclosed in them.

The *taenia saginata* is by far the most common of all the tape worms in man, owing to the prevalence of eating rare beef rather than rare pork or fish. The *taenia solium* and the *bothriocephalus latus* are both extremely rare in the United States.

The *taenia solium* is especially dangerous, owing to the frequency with which its segments are regurgitated into the stomach where the shell is dissolved from the eggs leading to heavy infection with the larval form of the parasite. This larval form of the *taenia solium* was thought to be a distinct species of parasite which was called the cysticercous *cellulosae*. Infection with it is often fatal on account of the immigration of the embryos to the brain and heart

where they become encysted and, by pressure, interfere with the functions of these organs.

The *bothriocephalus latus* is of especial interest on account of the frequency with which patients infected with it develop an anemia of a megaloblastic type. As only about half the cases infested develop the anemia, the condition incident to the mere presence of the worm cannot be the sole cause of it. On the other hand, those cases which have the anemia are promptly restored to health on expulsion of the worm. Thus, it would seem that while the worm is an essential cause of the anemia in these cases, there must be another factor in the production, the nature of which is, at present, totally unknown.

Besides being the usual host for these three varieties of tape worm, man is not infrequently the accidental host for the larval form of the *taenia echinococcus*. This parasite habitually infests canines in its mature form, and sheep in its larval form. Man is infected by handling dogs soiled with material containing the eggs of the parasite, and *echinococcus* cyst of the liver develops. After the six-hooked embryo has been liberated by the digestion of its shell in the stomach, it enters the intestine and bores its way through the mucous membrane. Entering the branches of the portal vein, it is carried to the liver. In about four weeks the embryo loses its hooklets and becomes transformed into a cyst surrounded by a thick wall of inflammatory connective tissue. The true cyst wall, or that formed by the parasite itself, is about from 20 to 50 microns thick, and characteristically laminated. From its inner surface a large number of protuberances develop, which become converted into little capsules containing the young larvae. The cyst continues to grow, often weighing more than 20 pounds. Many of the brood capsules become free and form secondary free floating cysts which, on palpation, give rise to a peculiar, jelly-like quiver, the "hydatid thrill." The larvae of the scolices inside the cyst are provided with a circle of little hooks, many of which become detached; and the presence of these free hooklets in the aspirated fluid is pathognomonic of the disease.

The different species of round worm vary greatly in their pathologic effects, from the insignificant irritation caused by the pin worm to the intense anemia caused by the hook worm. The *trichina spiralis* and the hook worm are the most important pathogenic varieties of this class.

Trichinae inhabit hogs and rats as their habitual hosts. Man is infected by eating imperfectly cooked pork or raw sausage. When the larvae reach the intestine of man

they develop into small worms, male and female. The males die after fertilizing the females, and the latter burrow through the intestinal wall and deposit embryos, about 1500 for each female. These are migratory, and within from 8 to 24 days after the infection begin to reach the striated muscles. After entering the muscle fibres they form cysts in which develops a spiral, larval form. While the females are in the intestinal wall, diarrhea, abdominal pain, nausea and vomiting are the most prominent symptoms. When the embryos begin to attack the muscles, fever and violent muscular pains are present, especially in the arms and legs. The eye muscles are involved early, and this is characterized by edema of the eyelids, pain on moving the eyes and, in some cases, fixation of the eyeball. After the larvae become encysted the symptoms subside and the patient gradually recovers.

Leucocytosis with marked eosinophilia is a prominent blood change in this disease. The writer was led to the recognition of a sporadic case in Richmond some time ago, by an examination of the patients blood which showed an eosinophilia of 40%.

The hook worm is parasitic for man only; and is, probably, the most important of all metazoan parasites. Attaching themselves to the mucosa, they apparently act as capillary tubes through which the blood oozes into the lumen of the intestine, at the same time producing a substance which prevents the coagulation of the blood. In this situation they discharge large numbers of eggs, so that the diagnosis of the disease is very easy by a simple examination of the unstained feces. The eggs are oval, 35 by 70 microns in size, and very characteristic in appearance with their slightly refractive shell containing the embryo in various stages of development.

In about 24 hours after the eggs have been discharged with the feces of an infected person, the embryos emerge from them, and, after undergoing a series of changes, become infective larvae. Infection takes place in two ways—through the skin or by the mouth. The theory of infection through the skin was first advanced by Loose in 1898, but was met with incredulity. Since that time experimental evidence has led to its acceptance as probably the most frequent method of infection.

The patient with soil containing the larvae which penetrate the skin, nearly always the skin of the legs and thighs. The initial lesion is an erythema, followed by a pustular eruption. This condition is known as ground itch. The larvae continue to penetrate until they reach the veins, then pass with the blood through the heart to the

lungs, up the air passages, down the esophagus, through the stomach to the duodenum.

The anemia of this disease is of the chlorotic type, and varies in degree with the number of worms present and the duration of the disease. In one case seen by the writer, the hemoglobin was 5, or 1-20 of normal, and the red blood corpuscles 700,000 per cubic millimeter, giving a color index of .31. This, however, was an extreme case which proved fatal a few days after the examination.

As a rule, the hemoglobin is about 40, and the red blood corpuscles between 2,500,000 and 3,500,000 per cubic millimeter. There is no leucocytosis as a rule. In cases with good resisting power, eosinophilia is marked; but in exhausted patients with severe infection, the eosinophiles may be below normal. In one case recently examined, which is now recovering, the eosinophiles were as high as 20 per cent. of all the leucocytes. In the fatal case noted, they constituted only 1 per cent.

Besides the anemia, other prominent symptoms of the disease are a dirty, yellow skin, edema of the face and lower extremities, extreme lassitude with a blank, stupid expression, dilated pupils, pronounced, visible pulsation of the carotids, and dyspnea no exertion.

The diagnosis rests on finding the ova of the parasites in the stools. As some cases are very obstinate, an examination of the stools for eggs a few days after appropriate treatment should always be made, and if they are still present, the treatment should be repeated at intervals until no eggs can be demonstrated.

Ureteral Catheterization.*

By Dr. R. A. Barr, Nashville, Tenn.

The value of urethral catheterization in the diagnosis and differentiation of urinary diseases is so universally conceded that I shall attempt no discussion of this feature of my subject. My object is to present to this body a somewhat simplified technique for urethral catheterization, to call attention to the fact that with a little practice, the operation can be readily done (it is especially easy in women) and to urge its use as a routine measure before interfering surgically in disease of the urinary organs.

Assuming that the operation can be done by any surgeon, and that the procedure is not attended with any risk to the patient, it would follow that every case of known

* Read before the recent meeting of the Southern Medical Association.

or suspected renal disease should be subjected to this kind of investigation, for without it, it is impossible to determine whether one or both kidneys are involved, and also impossible to determine the functional value of the separate kidneys. As to the first assumption, a little practice will convince any one of the simplicity and ease with which it can be done in women. In men with normal urethræ the difficulty is only slightly greater. At least it may be said that no surgeon of experience can afford to hesitate on account of the difficulty. As to the safety with which it can be done, while it cannot be said that there is no danger whatever, it is assuredly an accepted fact, among those with experience, that the risk is slight in careful hands. There are patients who have urinary fever following the simplest instrumentation, and in such patients ureteral catheterization may be followed by a severe reaction, but such contingencies are remote and cannot be taken into consideration. So in urinary tuberculosis, unnecessary instrumentation should be avoided, but here we often have one of the strongest indications for ureteral catheterization, in order to determine whether or not nephrectomy is indicated. It may be said that the only positive contraindication to ureteral catheterization is anatomical, if the urethra is too small to admit the endoscopic tube, nothing of course can be done. Kummell has catheterized girls at twelve and boys at fourteen years of age. Urethral structure or enlarged prostate in adult males will at times interpose insuperable obstacles. Small endoscopic tubes will enable one to cope with many of these cases however.

To restate the indications for ureteral catheterization once more, we will say that a procedure of such positive diagnostic value that is comparatively easy and safe of accomplishment, should at least be attempted in every case of known or suspected renal disease in which the urethra will accommodate a suitable instrument. In this connection it might be well to state that instruments twenty French in calibre or even smaller are made and used, but of course the difficulty of operation increases in proportion to the reduction in the calibre of the endoscopic tube.

In cases in which the ureteral orifices are obscurely marked, they are more readily recognized after the hypodermic injection of indigo-carmin which drug gives a blue color to the urine. If watched for, the spurt of blue urine will serve as a guide to the opening from which it comes. This drug and also mytheline blue, has been used as a test of kidney function since the promptness with which the chromogens ap-

pear in the urine, depends upon the integrity of the kidneys. A more reliable test however, is to inject 1 c.c. of a one per cent. solution of phloridzin hypodermically. This should cause the appearance of sugar in the urine of a healthy kidney in from ten to twenty minutes. Renal disease delays the appearance of sugar, and if Haynes', or some similar test fails to show the presence of sugar in the urine coming from a kidney within forty minutes after the hypodermic injection of phloridzin, that organ is considered incapable of taking upon itself the entire urinary function. In other words, the kidney should be at least one-half as good as a normal kidney for it takes one-fourth of the usual amount of kidney tissue to perform satisfactorily the function of urinary excretion.

But to return to the technique of ureteral catheterization, the instruments which I use and which I have here with me, are the Kelly cystoscope for women and the Swinburne endoscope, of extra length, for men. These instruments are simply plain tubes with obturators made to be lighted by a small cold lamp which is placed at the inner extremity of the endoscope. The carrier for the lamp is placed in a groove within the lumen of the endoscope. Neither water nor air dilatation is used beyond the slight distension with air gotten by placing the patient in moderate Trendelenburg position and introducing the tube. Since the bladder is not distended under pressure the lumen of the endoscope is left open and the catheter can be passed directly through it. This does away with a great deal of cumbersome appliance and gives a larger inside calibre to the instrument than is found in the cystoscopes of the same outside measurement. The catheters used are the ordinary flexible type and, as already stated, are introduced directly through the open lumen of the endoscope. These catheters are so flexible after boiling that I have found it advantageous to use a small metal tube as a carrier for the catheter. This gives you better control of the tip of the catheter which projects about a half inch beyond the end of the tube, and enables you to push the catheter more readily up the ureter once the tip is engaged in the opening. The tube I use as a carrier for the catheter I made from a metal Kelly ureteral catheter by cutting off the blind end. I have found this more satisfactory than to use a wire within the catheter since the wire within the catheter is in somewhat difficult to remove and the stiffened catheter does not follow the ureter so readily. The larger and stiffer catheters can be used naked so to speak.

I have never used a general anæsthetic

but of course it will occasionally be essential. To adults a quarter of a grain of morphine should be given hypodermically half an hour before the operation. The first step of the operation itself is to fill the bladder by means of a fountain syringe and rubber catheter with a solution of permanganate of potash one to four thousand. The patient is then instructed to empty the bladder. In this way the urethra is thoroughly washed out. The patient is now placed in the lithotomy position upon any office table with which you can get Trendelenburg position, and the feet are fixed to the lithotomy posts. A very simple and satisfactory device to prevent the patient from slipping when the table is elevated is to take a piece of ordinary roller bandage, tie one end to the table at the base of one leg holder, pass it around the patient's neck going under one shoulder and over the other after the fashion of a clover crutch band and finally tie the other end to the base of the of the opposite leg holder. To prevent this bandage from cutting when the patient's weight falls on it, a small pillow or folded sheet is placed under it where it goes over the patient's shoulder.

With the patient in position you proceed to anesthetize the urethra. Anesthesia is gotten in the female by introducing a couple of one-half grain tablets of cocaine into the urethra. A solution cannot be used in the female urethra because it will immediately run out at one end or the other. As soon as these tablets are softened in the urethra, they are spread over the surface of the mucous membrane by rubbing with some smooth instrument. I ordinarily use the obturator of an endoscopic tube. In from two to five minutes anesthesia will be satisfactory. A calibrator is now introduced and the meatus is stretched to the size required.

In the male anesthesia is gotten by filling the anterior urethra with a two per cent. solution of cocaine. This is held in for about five minutes. A Klotze endoscope is then lubricated with glycerine and passed back as far as the prostatic urethra where a couple of half grain cocaine tablets are placed by being introduced through the lumen of the tube. In from two to five minutes more this portion of the urethra will be anesthetized.

In both sexes as soon as anesthesia is satisfactory a rubber catheter is introduced and the bladder emptied as completely as possible.

The next step of the operation in either sex is to raise the table to the Trendelenburg position and introduce the endoscopic tube. The obturator is then removed, the light carrier placed in position and the light turned on. The small amount of urine in

the bladder is swabbed out with cotton on wooden applicators, and we are now ready to look for the ureteral orifices. Directions for locating these are more or less futile. The only way to learn how to find them is by practice. They are located from one inch to an inch and a half posterior to the internal opening of the urethra, and lie about half an inch to either side of the median line. Often they are marked, the orifice being situated upon a papilla, or at the end of a groove. In some cases the orifice stands distinctly open at all times, but again the opening is a mere slit which does not show up except when the urine comes through.

Once the opening is recognized, it is kept in view, the white catheter is passed along the lumen of the endoscope until the tip engages in it. If the metal carrier is used for the catheter, it is pushed in against the ureteral opening, and the catheter fed through it until introduced a sufficient distance. The carrier is now slipped off, the catheter meanwhile being held carefully in place. If it is desirable to catheterize both ureters, I usually remove the endoscope and re-introduce it beside the catheter in order to have its lumen free for search for the openings before catheterizing either. This will shorten the second operation which is more difficult for both operator and patient by reason of the catheter already in place.

This method of urethral catheterization is merely a slight modification of the Kelly method adapted to both sexes. It is very simple and satisfactory and best of all does not require any expensive apparatus. The plain endoscopic tubes with light attachment cost less than ten dollars each, and a battery or current controller can be gotten for the same sum.

In conclusion I merely wish to emphasize that the procedure is not difficult of accomplishment, and that urethral catheterization should be more frequently used for diagnostic purposes than has been customary in our Southern section. It is unnecessary, probably, to add that all instruments should be carefully sterilized, and the operation done with every attention to cleanliness.

Mister Doctor.

By Albert D. Parrott, M. D., Kinston, N. C.

'Tis funny what they say,
In that Ironical way,
About you Mister Doctor;
But really you don't care,
If they come about it fair,
Do you, Mister Doctor?

They say ignorance is great,

In that bare and shining pate,
 Mister Doctor;
 Of course it gives us pain,
 But we love you all the same,
 Mister Doctor.

They say, in all this Christian Land,
 You are the worst, old "Sinner Man,"
 Mister Doctor;
 If this is true, you ain't to blame,
 And we love you all the same,
 Mister Doctor.

What is 'dis here Christian Scientist stuff,
 And 'dat, rubby, creepy, feely Osteopathic
 bluff,
 Mister Doctor?
 A fust class thing, when we ain't sick,
 But when we are, we wants you quick,
 Mister Doctor.

We meet your fees with many squalls,
 And tantalize you with needless calls,
 Mister Doctor;
 But if little Tim is sick,
 We forget it, oh! so quick,
 Mister Doctor.

So with all our many quips, twits, and slams,
 And our ludicrous epigrams,
 Mister Doctor;
 Now and then we doubt you,
 And say horrid things about you,
 How could we do without you?
 Mister Doctor.

And when you fall in that last long sleep,
 Many there'll be who'll vigorously weep,
 Mister Doctor;
 And when you reach that happy land,
 God has prepared for Mortal Man,
 I hope you'll clasp a cordial hand,
 Mister Doctor.

Tuberculosis.*

By George Brown, M. D., Ex-President American
 Anti-Tuberculosis League, President Fine
 Ridge Sanitarium.

Tuberculosis. A name I never mention without a shudder, and think with Dr. Huber that: "It is with a real sense of melancholy that one contemplates the long death-roll of those of the world's great men and women who have succumbed untimely to the tubercle bacillus, which is and has been through countless generations by far the most potent of all death-dealing agencies. Had it not been for this detestable parasite Bastien Le Page might have us another Joan-of-Arc to feast our eyes upon; Rachel might for many years have continued to permeate the spirits of her audiences

with the divine fire that was in her. Our navy did well enough in the 1812 War, as all the world knows: but what a rip-roaring time there would have been if John Paul Jones had lived to take a hand in it. We might be reading some more of Robert Crane's splendid war stories; we might have had some of Robert Louis Stevenson's delicious lace-work; Schiller might have given us another Song of the Bells; we might have taken another "Sentimental Journey," with Laurence Sterne; Henry Cuyler Bunner might have continued to delight us, and to touch our hearts; John Keats might have given us another "Endymion." Had the tubercle bacillus permitted, Nevin might have vouchsafed us another "Rosary;" Von Weber another "Furyanthe Overture;" Chopin might have dreamed another "First Polonaise;" and the tender flute notes of Sidney Lanier might even now be heard. Maria Constantinova Bashkirtseff Lavier Bichat, John Godman, Rene Theophile Hyacinth Laennac, Henry Purcell, John Sterling, Henry Timrod, Artemus Ward, Henry Kirks White, Henry David Thoreau, Baruch Spinoza—such names as these are but a meity among those of the world's nobility, whose precious lives were cut off in their prime by the "Great White Plague."

When a student looks back for the past years and reflects on what the world has done to alleviate the Tubercular unfortunates, and realizes what the future has in store for them, we can but offer thanks for those devoted men and women who have been the pioneers in this fight, and can but pause a moment to give praise to those to whom praise is due.

I saw the birth of the first organized Association in the United States to fire the opening guns of the campaign, which reverberated from Maine to Mexico. Since that time having put my hand to the plough I have never looked back.

Five years ago I started the agitation for a State Sanitarium for consumptives in this State, with little assistance from those who could give it, and personal abuse from the "thirty cent" doctors. I have worked on until I can see an assurance that it will yet be built.

In submitting my name as a candidate for the House of Representative from Fulton county last June, I was overwhelmingly elected, heading the ticket with eleven opponents in the field by over 500 votes. This without any solicitation of votes on my part, only stating that I made the race purely in the interest of the Tubercular poor.

The educational campaign can be said well established. There is no need, however, of any politician and wiseacre jump-

*Read before the Southern Medical Association, Atlanta, Ga., Oct. 15, 1908.

ing in and rushing into the front to educate the dear people.

What the dear people want is not education, but bread and meat and a place to sleep and medical attention for the Tubercular poor. It is absolutely horrifying to read the Sunday papers and magazines of today and see what harm they are doing. They are preaching to these poor unfortunates that fresh air and such rot is all any one needs to cure this disease.

In the name of God where are the people they have cured? Listen to plain statistics: Average cures of incipient cases given proper Sanitarium treatment, 60 to 74 per cent. Average cures by home treatment, 1 per cent. Yet these miserable would-be reformers are daily preaching to these people that there is nothing else that they need.

Why do they do this? Simply to get their name in the papers as President of some Trained Nurses' Association of the charitable grafter who never spent a cent in his life to help these people, they bloom out as Tuberculosis experts.

It is high time that the legitimate students of this disease quit treating it and refer patients to these newspaper notoriety seeking gents and let them take care of them.

We have in our town ad nauseum. For nine years they have refused any help to these people until some one else contributed the time and money, and interested the public, now they have suddenly found out how much they love these poor sufferers. It opens out a new field of graft for Yankee lecturers with knowledge five to eight years old sprung on the listeners like the "great" Knopf, who in his lecture here, given under the auspices of these philanthropists, brought us as he said: "The message that Tuberculosis was not hereditary," delivered amidst great applause. Imagine the intelligence of the audience.

Compare the work of this so-called philanthropist to the work of the Georgia doctors and the whole mass goes up like chaff before the wind.

I refer to the work of a plain, elegant Atlanta gentleman and physician, Dr. Louis Roughlin, who has had no newspaper notoriety, who organized the first State Society here to fight this disease, whose experience with this disease is not on paper, but who has turned out a per cent. of cures unequalled by any man on earth. The world does not know it, but the world will know it when his work is given to the American public, this plain unassuming gentleman will come into his own kingdom.

He helped to found the first institution on modern lines in the South, for treating this disease, and it will stand near

this city as a monument to his work and skill. These are the men who should have the proper credit for their work. Men who are curing patients and saving lives are not writing newspaper stories.

I wish to cite your attention to the following cases, which I will be glad to show any one interested in this work.

Case 1.—A. C. B., male, age 30, merchant, one brother dies of tuberculosis in 1888, and in 1906, otherwise family history negative; past history negative. Present History; Contracted a cold latter part of March, 1908, coughed a good deal, took patent medicine for cough, but received no relief, began losing flesh rapidly and spit sweats, and lost appetite, was growing weak, is troubled with shortness of breath, cough became worse and troublesome, patient lost 14 pounds; night sweats become exhausting and patient consulted a physician, and he was told he had tuberculosis.

On admission, patient looked emaciated, weak and short of breath, says he felt exhausted, cannot sleep on account of cough and night sweats, complains of pain in chest, and expectorates a yellowish tenacious sputum of a foul odor, slightly blood-tinged, tongue coated, weight of patient 121 pounds. Temperature at 4:30 p. m. 103 deg., pulse 120, respiration 28.

Physical Examination.—Several signs of marked consolidation at upper right lobe, and evidence of charity formation and evidence of involvement of lower right and upper left in a lesser degree; examination of sputum reveals numerous tubercle bacilli—ophthalmo-tuberculin test positive.

Subsequent History.—Patient was admitted July 19th, 1908, and continued to have marked evening elevation of temperature varying from 99.40 to 102.60 F until the 20th of July, when temperature became normal and continued so with the exception of a slight disturbance, this was soon corrected and temperature remained normal to date of patient's discharge from Sanitarium. Cough became less troublesome, on the 6th day after admission, and finally ceased all together, night sweats stopped one week after admission, appetite improved and physical signs began to disappear, repeated examination of sputum since October 20th, failed to reveal any tubercle bacilli, and patient was dismissed November 8th, weighing 155½ pounds, a gain in weight of over 24 pounds. Length of staying in Sanitarium, four months.

Case 2.—T. H., female, age 14, school girl.

Family and previous history negative.

Present history began coughing and losing flesh a year ago, and troubled with night sweats, lost about 12 pounds in the

last ten months, had a hemorrhage and consulted a physician.

On admission to Sanatorium patient looked thin, markedly anemic and nervous, complains of pain in chest and under shoulder blade and is troubled with shortness of breath, and hoarseness, physical examination reveals involvement of both upper and lower left globe. examination of sputum reveal T. B. ophthalmo-tuberculin, the negative with one-half of 1% solution, positive later with 1% solution, evening temperature on July 19th, date of admission, 100.20 F., pulse 99 R. 24.

Subsequent History.—Patient continued to show evening elevation of temperature varying from 99 to 100.29 F. to August 22, when it became and continued normal to Sept. 15th, since then patient's temperature was normal to date of discharge from Sanatorium, cough soon disappeared, and patient had no night sweat during stay at the Sanatorium, anemia improved, and patient gained 30 lbs. in weight, hoarseness and physical signs disappeared and sputum is clear of T. B. Patient was dismissed Nov. 8th. Length of stay three months and 21 days.

Case 14.—W. H. C., male, age 28, banker.

Father died from "lung fever" ten years ago, one brother died of tuberculosis two weeks prior to patient's entrance to Sanatorium. Patient was constantly with his brother during the last three months of his brother's illness.

Patient had catarrh and slight cough the last five years, cough has been growing worse, and is troubled with hoarseness, had no night sweats, expectorates in the morning a thick yellowish sputum, no blood, lost weight the last three months, and has an evening rise of temperature.

Physical examination shows involvement over entire left lung. Ophthalmo-tuberculin reaction, and examination of sputum is positive. Patient was admitted on August 19th, run a temperature varying from 99.8 in the morning to 101 and 104 degrees in evening, patient is very weak, eats and sleeps badly, this condition continued with but slight improvement to September 12th, when evening temperature fell to normal, and has remained so, appetite improved and patient rests comfortably, physical signs are rapidly disappearing, and patient gained 35 pound in weight since his admission to the Sanatorium, his last specimen of sputum still contained a small number of T. B. Patient was advised to remain in the Sanatorium for a short while longer.

In concluding this article I can say that the facts brought out by the American Anti-Tuberculosis League three years before any other society was formed still stands as

truths. That this disease is infectious and curable—that 80 per cent. can be cured if taken in time. That the greatest source of infection in the world is milk and inhaling germs, that climate never cured a living soul. That the serum treatment offers, in the hands of experienced and long trained men the best results. That it can never be given with safety by a man who has not had a long and careful training in giving it. That the only hope for permanent cure is early diagnosis and sanitarium treatment, never lasting less than six to twelve months.

That the doctor who does not give the patient a chance by early diagnosis and proper care is a criminal.

A Few Recent Unique Cases.†

By Joseph Graham, M. D., Durham, N. C.

Not having the necessary time to prepare a paper on a surgical subject, and wishing to show my interest in the Society, I decided to present a few unusual cases that have occurred in my practice since the last meeting.

Case No. 1.—Excision of three feet of the ileum and all of the cecum and ascending colon. Fay W., aged 11 years; patient of Dr. E. A. Abernethy; admitted to Watts Hospital, May 14, 1908. Diagnosis—Appendiceal abscess. After a thorough examination I agreed in the diagnosis.

History.—Four days previously sudden pain in abdomen followed by nausea and vomiting. Pain localized over appendix area. Marked localized tenderness and rigidity. Localized area of dullness on percussion. Rectal examination detected a mass in ileocecal region. Temperature 102.5.

Previous History.—Had four attacks of colic in past 2 1/2 years. The last two had been followed by nausea and vomiting, localized soreness and confined him to bed for a few days.

Operation.—Incision 1 1/2 inches through right rectus. Examining finger detected the appendix. This was elevated and removed. Examination showed acute inflammation but no pus. Then examined to ascertain the cause of the mass. we had detected. Found a growth involving the cecum and ileum. Therefore, I enlarged the short incision into an 8-inch incision. Examination showed a growth in the ileum cecum and ascending colon with marked enlargement of the ileocecal glands. Some of these glands were as large as hickory nuts. We decided that it was possible to

†Read before the N. C. Medical Society at Winston, N. C.

remove the growth and performed a resection of ileum cecum and all of ascending colon, the wide involvement of the mesentive glands required removal of so much mesentery that it was necessary to resect an additional foot of the ileum so as to secure healthy bowel for the anastomosis. There was no escape of fecal matter, rubber covered clamps being used for coprostasis. The bowel ends were inverted and a lateral anastomosis by needle and thread was made between lower end of ileum and transverse colon. The total length of removed bowel measured four feet, four inches. Fearing some local infection, I drained area of anastomosis by a cigarette drain. Inserted a glass drain to bottom of pelvis and on account of shock filled the lower abdomen with salt solution. The wound was closed by continuous catgut suture of peritoneum and interrupted S. W. G. sutures. The patient was placed in the exaggerated Fowler position. His convalescence has been without incident. Examination of the removed structures shows involvement of the ileum cecum and ascending colon. The enlarged ileocecal glands contained pus. There were no tubercles on the surface of the peritoneum and no ulcers were found in the bowel. The specimen was sent to a pathologist and we will have his report at an early date. For successful issue in this case I am deeply indebted to Drs. C. A. Hicks, R. L. Felts and C. A. Woodard, who gave me very able assistance.

August 14th.—Three months after operation the patient is doing well; has gained rapidly in weight and now weighs more than at any time in past two years. Apparently he is in perfect health and suffers no inconvenience from the loss of his intestine.

Dec. 16, '08.—Seven months after operation, patient is in perfect health; is fat; weighs more than ever before. So far as he knows has no indigestion, no colic; apparently he is not inconvenienced by the loss of his intestine.

Aesthetic Alimention.

By Geo. M. Niles, M. D., Atlanta, Ga.

"How near to good is what is fair."—Ben Johnson*

This title was suggested by a recent editorial in a New York Medical journal, arousing the thought that a discussion on the benefits of seeking the beautiful and alluring in eating might be of both interest and profit.

It seems a far cry from John the Baptist, eating locusts and wild honey in the wilder-

ness, to Lucullus, the most princely entertainer of his age; from the rude customs of the Goths in the third century, to the refined doctrines of Omar Khayyam, the material Epicurean of the twelfth; or from a tramp, with grimy hands, eating a "hand-out" on the back steps, to a Bradley Martin banquet.

These contrasts represent evolution, education and civilization.

But who would gainsay the assertion that John the Baptist would have better enjoyed attempting meal under a sheltering roof? That the Goths would have been susceptible to some of the amenities of dining? or that the humble tramp would have partaken his simple repast with greater relish from a clean plate and with clean hands?

Those who eat to live, and those who live to eat are the extremes. They are not presentative.

The lunch-counter fiend, who bolts his dinner in five minutes, and the disciple of Horace Fletcher, chewing his food until it is imperceptibly swallowed, are two extremes. Neither gets the highest pleasure from eating.

It is necessary that we should eat. Fuel must be furnished our bodily furnaces that a proper temperature may be maintained through the vicissitudes of heat and cold. The adult must have enough nourishment to provide energy for the various functions, voluntary and involuntary, while the growing child requires a surplus commensurate with increase in weight.

An active individual cannot care for as much food during an enforced rest, while, in a normal convalescence from wasting disease, the appetite is insistent in its demands.

Now let us get to the point: as the boy, whistling on his way to school, finds the journey shortened thereby; as the laborer in the field, or the busy housewife in the home finds that singing and cheerfulness lighten the task and speed the hours, so we can apply and elaborate that principle as an aid to that great multitude suffering from capricious appetites and faulty digestion.

The science of the beautiful can deal with actual phenomena, with facts as hard, with rules as fixed and laws as inflexible as do the sciences of biology and physics.

There lies within every intellect, no matter how uncultured, an inherent love for the beautiful. Even the man who can see naught savoring of poetry in "A primrose by a river's brim," has a tuneful chord somewhere within his soul, if it can only be vibrated.

Everybody knows how anger, grief or

* Read before the Fulton County Medical Society Jan. 21st, 1909.

worry will destroy the desire for food as well as interfere with its digestion.

The writer once saw a cat subjected to an x-ray after being fed. She was quietly stroked until she began to purr, and her stomach could be plainly seen moving in rhythmical waves. In a few moments her tail was pinched, causing a profane outburst of indignation on her part. Immediately all motion of the stomach stopped, nor was it again resumed until she was pacified.

We know how savory odors make the mouth water, and how a tempting array of mouth-cooked viands suitably garnished pleases the eye; but we do not fully realize how potent the effect on the digestion is the appeal to the aesthetic in our nature.

Under the charming influence of a good meal, tastefully served, where individual fancies are consulted; where there is neither hurry nor tiresome delay, where all the externals that make for beauty are present, and where cheerful conversation rules the board, the digestive organs are at their best. Under these benign influences the vaso-motor nervous system relaxes, the arteries furnishing blood to the alimentary tract, a plentiful amount is provided, allowing all the forces that supply our needed energy and heat to perform their functions efficiently.

The expensive dinners, embodying culinary symphonies by high-priced chiefs, where the aesthetics are represented in every detail, are within the reach of only a few; but to some extent an appeal to the aesthetic in alimentation is within the reach of all.

This fact the writer wishes to stress: that the cultivation of not only the substantial phases of energy and thought, but also the *flowers* of energy and thought will benefit the mind, the character and also the actual working forces of digestion governed by our sub-consciousness.

A recent writer has said, "There is no tonic so uplifting and renewing as joy, which sets into active exercise every constructive power of the body." So, when suitable food is provided and served, attention to little details which go to make it attractive is time well spent.

Let me insert this simple illustration. Every one will admit that tea served in an egg-shell china cup on a dainty cloth tastes better than if it were in a thick yellow cup, bearing the scars of rough usage, and poured from a cracked teapot. We may be thirsty and faint, and drink it down from sheer necessity, but something within us revolts, and we do not get the full benefit of it.

The novelists have stirred our emotions with prose; the poets have reached our

inner natures with their verses; the painters have uplifted us with their creations of form and color; while the musicians have borne us away on a sea of harmony and melody.

The writer of this article, in an humbler but fully as important theme, appeals to the senses that lie at the very foundation of our living. He appeals that in furnishing the needed nourishment, it be not shoveled in like coal into a furnace, or poured like corn into a hopper, but that the amenities and aesthetics of civilization be observed. Thus will we not only assist those sub-conscious forces, which work silently and faithfully, to give us their best fruits, a healthy mind in a healthy body; but we will also help onward that evolution of the aesthetic, which is the duty of every enlightened nation.

Treatment of Placenta Previa.—Kronig (Zent. f. Gyn.) states that the cause of death in placenta previa is in almost all cases loss of blood; seldom is sepsis a cause of death. The improvement in the care of these cases must be in the line of stopping the hemorrhage. Before the beginning of labor hemorrhage has occurred which has ceased, either spontaneously or by the use of tampons in the vagina, the cervix being closed. As soon as the contractions of labor begin the hemorrhage is again brought about by the stretching of the zone about the cervix. When a foot can be brought down this acts as a tampon and hemorrhage is controlled. After delivery the bleeding begins again, and massage, hot injections, and Crede's expression method are all made use of. Manual removal of the placenta must be practiced in 6 per cent. of all cases. In many cases death takes place two to seven hours after labor from loss of blood. The bleeding generally comes from torn veins in the isthmus and upper part of the cervix. This location when covered by the placenta has undergone much softening and the fibers are separated by the villi which have penetrated the tissue. This tissue is easily torn and the control of the hemorrhage is very difficult because the contractions increase the rupture of the vessels. The more the isthmus is stretched the greater is the hemorrhage. Delivery may be effected by a Cesarean section high up in the abdomen. The vaginal Cesarean section has its advantages when the placenta is implanted over the anterior wall of the uterus. When the placenta is placed posteriorly the cervical and the anterior vaginal incisions are of value. The abdominal section allows of seeing clearly the location of bleeding and tamponing it better. If bleeding does not cease the uterus should be amputated supra-

vaginally. When the woman is brought to the hospital with a tampon in the vagina the dangers of sepsis are too great to allow of a classic Cesarean section. Vaginal amputation may be necessary.

Dyspnoea and Dysphagia Due to Enlarged Thymus; Recovery after Partial Removal.

Hinrichs (Berlin. klin. Woch., April 27, 1908) reports the case of a girl, aged 10 months, who was admitted for an extensive angioma of the ear. At about the fourth week respiration and deglutition became difficult, and on retracting the head a tongue-shaped tumor was forcibly propelled upwards at each expiration, slightly to the left of the supra-sternal notch. During inspiration the tumor could be felt behind the middle of the supra-sternal notch as a small transverse ridge, and there was dulness over the upper part of the manubrium. A large portion of the thymus was removed without an anæsthetic, with an immediate relief to respiration and deglutition. Part of the gland was left behind so as to avoid any influence on development. The portion removed weighed $92\frac{1}{2}$ grains; it was abnormally ascular, but otherwise of normal structure. Dysphagia is an uncommon result of enlarged thymus, dyspnoea being usually the indication for operation. Some have attempted to treat the condition by intubation or tracheotomy, but the latter operation, according to Rehn, has been attended with a fatal result in each of the eight cases in which it has been tried. The writer advocates leaving a portion of the gland behind for the reason already given, and states that removal of the manubrium is preferable to excision of the entire gland as practiced both by Purucker and Ehrhardt. Difficulty of deglutition in infants should suggest the possibility of an enlarged thymus even in the absence of stridor.—British Journal of Children's Diseases.

Whilst the formula of Tyree's Antiseptic Powder is known to every practitioner, we deem this an opportune moment to submit, as additional evidence of its incomparable value, the views of those whose judgment of therapeutic agents of this class is universally accepted as authoritative in the highest degree. The confirmatory findings of such eminent authorities as Professor Kalusowski, of the George Washington University, Washington, D. C., and Professor William M. Gray, of the Army Medical Museum, Washington, D. C., and the opinions, based upon repeated clinical tests, expressed by exacting and conservative practitioners, are, we believe, sufficient to establish the contention that Tyree's Anti-

septic Powder is superior to any other product of a kindred nature, and that it affords results which cannot be obtained by the employment of its components when they are extemporaneously combined. A trial package will be mailed free of charge to physicians if they will send their name and address to Mr. J. S. Tyree, Chemist, Washington, D. C.

Euquinine in the Treatment of Malaria.

Malcolm Watson, of Glasgow, reports that the previous terrible infant and child mortality in the Malay States has been entirely stopped by the employment of euquinine, which he administers to his charges in doses of 5 grm. per diem (in a little sweetened condensed milk). Instead of the splutter and struggle experienced with the ordinary quinine salts, he finds the children almost without any exception punctually appearing, each with his tin, at the time of the daily dose. The author states that 12 out of 26 children died from July to December, 1906, while there has not been a single death during the six months of 1907.—Brit. Med. Jour.

The Medical Record's 2000th issue finds this fine old medical journal in the front rank of the scientific publications of the world. Independent, yet eminently conservative, its furnishes to its contemporaries a splendid example of the dignity, accuracy and usefulness to which all medical publications should aspire. For a great many years the *Medical Record* has been an influential factor not only in State medical affairs, but in national as well. When Dr. Shrady withdrew from its editorship, there were not a few who felt that the *Record* had reached its zenith, and would shortly begin to decline. How mistaken this opinion was everybody knows, for the *Record* never stood higher in the estimation of scientific men than it does today.

Under Dr. Stedman, who ranks among the world's great medical editors, the *Medical Record* has gone steadily forward, carrying onward the best ideals of medical service and efficiency. No one can fail to admire such faithful work, which assuredly enriches medical science in more ways than one. There is probably no medical publication in the country today the loss of which would be more of a real calamity. Fortunately the *Record* is not in any danger and it will go on for many a day fulfilling its worthy mission in the same efficient manner. While appreciating the literary and scientific value of this splendid journal, a word is due the publishers, Wm. Wood & Co., who have been responsible for no little part of the success of this publication.

They have certainly kept the best of faith with the medical profession. May they long continue to enjoy the fruits of their business integrity and industry.—American Medicine.

Contributions to the Teachings of Progressive Paralysis.—Pilcz (Wiener Med. Woch.) concludes an excellent article as follows:

1. Progressive paralysis begins at an earlier age in the descendants than in the preceding generation.

2. In the family type of the disease, the children last-born seem to be attacked as a rule at an earlier age.

3. In conjugal paralysis, the interval between syphilis and progressive paralysis is generally shorter in the wife than in the husband.

4. The duration of the paralysis is apt to be longer in the descendants than in the preceding generation. In the cases of conjugal progressive paralysis, it is often longer in the husband than in the wife.

5. The simultaneous spinal affection seems to be more frequently identical in the cases of congenital or family paralysis progressiva.

6. In the occurrence of congenital or family paralysis progressiva, the disease apparently has a predilection for one sex (father and son, two brothers, or two sisters, etc.).

Surgical Treatment of Exophthalmic Goitre.—Krecke (Muench. Med. Woch.) has operated upon seventeen cases of Basedow's disease in the last three years, with one fatality. In sixteen cases a unilateral extirpation of the thyroid was done, but in three cases this proved ineffective and had to be followed by resection on the other side. In the fatal case the entire gland had been removed on account of the presence of marked tracheal stenosis, but he believes that where such radical operation is necessary it should be done in several sittings or replaced by ligation of the arteries. Although he does not venture an opinion as to the final results of operation, there has been improvement in all cases, while four of the sixteen patients still reported more or less tachycardia. In none of them, however, was there a complete subsidence of exophthalmos.

Retardation of the Pulse Wave in Aortic Regurgitation.—Broadbent (Brit. Med. Jour.) has made careful observation on 30 cases with Mackenzie's polygraph, taking simultaneous records of the apex beat and the pulse. The cases were divided into two groups: (1) Those in which the amount

of delay between the apex beat and the pulse is normal or below; (2) those in which it is above normal.

On studying these groups it is apparent that there is very frequently considerable increase of the interval between the apex beat and the pulse wave in severe aortic regurgitation, while in slight rheumatic cases and in the majority of atheromatous and syphilitic cases the interval is one-fifth or less.

The main delay apparently occurs between the apex beat and the aorta. The systolic blood pressure seems to have nothing to do with the amount of delay. There is a rough correspondence between the extent of aortic regurgitation and the greater the one, the greater the other.

Increased pulse delay does not seem peculiar to aortic regurgitation. In two cases of adherent pericardium there was pulse retardation, and also in a case of congenital pulmonary disease.

Alloplastic Substitution of the Dura.—Hanel (Centralblatt f. Chirurgie) says that operative procedures upon the brain have been seriously hampered in the past by the non-existence of a suitable substitute for the dura. The employment of animal membranes was recommended by Morris, and the author performed experiments in this direction upon dogs; making use of so-called fish-bladder condoms, which are prepared from sheep's intestine and treated according to Hofmeister's method of catgut-sterilization. The experiments served to show that the membranes underwent softening as soon as three days later. At the end of seven days, a cellular tissue rich in bloodvessels could be seen to enter the softened membrane by way of the adjacent dura and neighboring muscle tissue. No substitution was noted proceeding from the pia, when this had not been injured during the operation. In the further course, the entire membrane became replaced by granulation tissue, rapidly followed by transformation into permanent connective tissue. The membrane again becomes considerably diminished in thickness. It results that the condom-membrane heals in, and while it undergoes absorption itself, yields the basis for the formation of a dura-like membrane. At any rate, one or two months later there existed a membrane solidly adherent to the dura, and presenting no adhesions of any kind with the brain.

Charlotte Medical Journal

Published Monthly.

EDWARD C. REGISTER, M. D., EDITOR.
CHARLOTTE, N. C.

GOURVOISIER'S LAW.

The memorable dictum of Courvoisier that obstruction of the common bile duct due to stone is not accompanied by dilatation of the gall-bladder, has long been one of the most valuable and accurate points in diagnosis of cases of obstructive jaundice. Moynihan embodies the law in the following words: "In cases of chronic jaundice due to obstruction of the common bile duct, a contraction of the gall-bladder signifies that the obstruction is due to stone; a dilatation of the gall-bladder, that the obstruction is due to causes other than stone." Perhaps no other single clinical sign is of so great value in the differential diagnosis of a condition which, under certain circumstances, presents such difficulties, Courvoisier's explanation of the occurrence of sclerosis of the gall-bladder in cases of obstruction by stone was, that stones had been present in the gall-bladder for long periods, that their presence there had caused recurring attacks of cholecystitis, and that, as a result, the gall-bladder walls had become thickened and fibrous. The gall-bladder, so affected, became by degrees more and more shrunken, and at the last was represented by a shrivelled mass of fibrous tissue, its cavity was greatly reduced in size, or almost obliterated, and the surrounding dense adhesions hid it from sight. Oft repeated attacks of cholecystitis and peritonitis resulted in the cicatricial compression and cramping of the gall-bladder. Distension of such a gall-bladder is, of course, mechanically impossible.

Fenger considered that "the atrophy in these cases is easily explained by the ball-valve action of a floating choledochus stone at the distal end of the cystic duct." This, however, leaves out of consideration the numerous cases where the stone is not found at the spot mentioned. His explanation would account for the emptiness of the gall-bladder in a few cases, but not for the cicatricial contraction present in the great majority.

On the other hand, Moynihan says that the association of chronic jaundice and enlargement of the gall-bladder does not always mean that stone is absent. The law may be infringed, sometimes flagrantly, as Courvoisier himself was the first to assert. In attempts to apply the rule in practical diagnosis it is well to keep in mind the fol-

lowing exceptions, which are enumerated by Moynihan in the *Edinburgh Medical Journal*.

The chief circumstances in which the law may be violated are:

1. Where there is a stone or a stricture in the cystic duct causing hydrops or empyema, together with the acute impaction of a stone in the common duct.

2. Where there is a stone in the cystic duct pressing upon the common duct.

3. Where there is distension of the gall bladder by an acute inflammatory process, with obstruction of the common duct by stone.

4. Where there is chronic induration of the head of the pancreas, with a stone in the common duct.

6. Where there is malignant disease of the common duct at any part of its course, or cancer of the head of the pancreas, and a chronic sclerosing cholecystitis.

After making full allowance for all these conditions, it cannot be denied that the validity of the law is established in at least 90 per cent. of the cases met with in practice. In the remaining 10 per cent. there is rarely a difficulty in diagnosis when the other symptoms are passed in review.

TRANSACTIONS OF THE STATE SOCIETY

We have just received a copy of the "Transactions of the Medical Society of the State of North Carolina," 1908 meeting. A thorough perusal has only strengthened our first impressions regarding the volume. Dr. Stanton deserves great praise and the thanks of every member of the society for the excellent manner in which the work has been done. Containing almost one thousand pages, every one of which is filled with valuable information, it quite exceeds any recent volume in mere size. Within its covers it includes tabulated information concerning the officers and members of the Society, of the Board of Medical Examiners and of the Board of Health. The report of the daily proceedings of the society is full and complete, and the faithfulness of the transcription is worthy of note. The proceedings of the House of Delegates, Board of Health, Board of Medical Examiners and of the session of the Society for Prevention of Tuberculosis, are also included. The report of the Obituary Committee presents the sad thought that a number of our greatest and best have recently passed away. The list of deaths contains some of the most illustrious names of the State. An excellent likeness of the lamented Dr. Murphy adorns the pages.

A large number of papers are included and many of these are worthy productions of worthy men. One is necessarily im-

pressed by the quality of the literary ability, to say nothing of the genuine scientific value, of the papers presented before our society. It would be difficult to choose from the number one more meritorious than others. There are a few papers presented by men from other States which greatly add to the interest of the volume. And yet we do not see that they have in any way excelled our own doctors.

A feature unique and unusual is a list by years of all those who have been licensed by the Board of Medical Examiners since the organization of the Board in 1859. This list compiled by Dr. Way from the original records gives the address of the applicant at the time when license was granted. Many have since changed their addresses and numbers have died. Information as to the college from which applicants graduated was not kept in the early history of the Board nor were grades recorded until 1889. But from 1885 to 1889, Dr. Francis Duffy recorded those making the highest grade and published the data in vol. xxxiii of the North Carolina Medical Journal. Non-graduates were admitted to examination up to 1900 and it will be noted that quite a large number of our doctors were licensed while still under graduates. It is, however, worthy of mention that the majority of these continued their studies and graduated from reputable medical colleges. From all these sources Dr. Way has produced a veritable mine of information. It is characteristic that he does not do things by halves. And by way of digression we may be permitted to remark that this issue of the Transactions is adorned in no small way by an excellent steel engraving of our worthy president.

Again we would compliment the secretary, Dr. Stanton, for having accomplished his task in a manner which does both himself and the whole society credit. Such a task means an expenditure of time and labor by no means inconsiderable. We have only to say that the work has been well done.

The publishers, Messrs. Edwards & Broughton, of Raleigh, also deserve credit for the manner in which they have gotten up the volume. The type is excellent, there are few or no typographical errors, the paper is of good quality and the binding substantial and attractive.

ARYLARSONATES, A SPECIFIC FOR SYPHILIS.

The use of atoxyl in the treatment of Pellagra has served to draw considerable attention to the properties of this particular preparation of arsenic. This is especially true in Southern States; but in foreign

countries also it has received no little consideration because of its seemingly specific action in cases of sleeping sickness. This last named disease is protozoal in its etiology, a fact which led Uhlenhuth to suggest that the above named drug might prove successful in the treatment of syphilis, itself also a protozoal disease. Acting on this suggestion Hallopeau and Salmon made experiments which gave promise of success. Carrying out experiments in a considerable number of cases of syphilis in which no other medication was employed Lambkin of the English army has concluded that certain preparations of arsenic actually do possess a specific action in syphilis. He, however, employed atoxyl in only a few cases; the rest were treated with soamin, a new preparation of the arylarsonate group. Of this drug Lambkin came to administer 10 grains hypodermically every alternate day until one hundred grains had been administered. This dose he advocates and seems to employ as a routine. In but a few cases was it necessary to give a second series of injections.

It is interesting to know just what atoxyl and soamin are. When it is said that they are arylarsonates it may be necessary to define the terms used. The term arylarsonates indicates those arsonates to which an aryl group is attached. The arsonic acids may be considered to be derived from arsenic acid by the replacing of the hydroxyl group by an organic radicle. The organic radicle may be a member either of the fatty or paraffin series, such as methyl, ethyl, etc., or of the aromatic or benzene series, as phenyl. The radicles of the former are known as "alkyl," and an arsonic acid of this type would be known as "alkylarsonic" acid. When the radicle belongs to the aromatic or benzene series it is called an "aryl" group, and the arsonic acid would be an "arylarsenic" acid. In the case of atoxyl and soamin, the aryl radicle is aniline. Briefly, the prefix "aryl" to arsonates indicates a radicle belonging to the aromatic series. Analyses have shown that atoxyl contains only 23.77 per cent. arsenic, it had been claimed that it contained 37.69 per cent. It is really a sodium salt of arsenic acid in which one hydroxyl radicle of arsenic acid has been replaced by the aniline radicle. The codex of the British Pharmacopeia gives the synonym for atoxyl as sodium anilarsinate, containing 27.2 per cent. arsenic, and gives it the formula $C_6H_7NAsO_3Na2H_2O$. Soamin is sodium paro-aminophenyl-arsonate, having the formula $C_6H_4.NH_2.AsO(OH)(ONa).5H_2O$, and containing 22.8 per cent. of arsenic, which is equivalent to 30.1 per cent. of arsenious acid, but its

toxicity is less than one-fortieth that of arsenious acid. It is incompatible with acids and solutions of the heavy metals or of quinine. Acids of the stomach cause the arylarsonates to be broken up, hence they are best administered hypodermically. Injections are made intra-muscularly under strict antiseptic precautions, the hypodermic syringe being sterilized by boiling in oil. In the exhibition of the arylarsonates in syphilis it is necessary that the system be free from mercury, as the latter disassociates the ingredients of the former. It is therefore well to wait fifteen days before beginning the use of the arylarsonates after mercury has been given, and *vice versa*.

The limited number of observations and the short period of time precludes the possibility of just conclusions as to how to proceed with a patient after he has had a full course of the arylarsonates and all symptoms have disappeared. Time and extensive experience alone can decide these questions.

We comment on the use of these arsenic preparations, not because we are ready to accept the conclusions drawn from their use in less than a hundred cases, but because the authority of the investigator deserves consideration, and because, if it is without harmful effects, as is claimed, anything which improves the chances of the early cure of syphilis is worthy of further investigation.

AMENABILITY OF DISEASES OF THE NERVOUS SYSTEM TO TREATMENT.

We often hear of the little that can be done for diseases of the nervous system, particularly if organic, that most of us accept the situation without protest; some of us because we ascribe a superior knowledge to those expressing the view, many because we lack the habit of independent thought.

No doubt an important circumstance in this belief is the fallacious deduction that deduction that since a dead neuron never regenerates, the corresponding disability must needs be permanent.

While the pathologist may justly establish our premises, he is incompetent to argue upon them as are any others not qualified by clinical experience and original conceptions. We owe a great debt to pathology, but we must also remember that circumscribed knowledge will never justify expansive conclusions.

True, a given function may cease with the death of its neuron, still, we cannot assume permanent disability without proof that other neurons may not perform the duties of those destroyed or even that organs of an allied nature may not be induced successfully to execute the function at issue.

There is little doubt but that Nature often provides, if not for regeneration, at least for a redistribution of living nerve elements in a manner analogous to the establishment of collateral circulation. We may, then, appropriately speak of indirect or collateral impulse, which, when available, are of great value in the re-establishment of discontinued activity.

But experience has shown that the development of these side-tracks is largely a matter of education. Upon scarcely any other hypothesis can we explain the brilliant results of Fraenkel and his followers in the treatment of tabetic ataxia. What can be more striking than the spectacle of an advanced tabetic re-educated to walk without his stick, and without his eyes glued to his feet?

Might we then, not be said to have accomplished much in the treatment of a disease in which, when we do not cure, we can develop such clinical improvement? Though the re-establishment of a function does not constitute a cure, it is a worthy substitute.

If we further reflect upon those luetic nerve lesions which may be improved in direct proportion to the degree of existing gummatosis, we certainly cannot regard the outlook as dark as has been our wont.

Add the varieties of neuritis whether toxic—and capable of cure by eliminating the causative element—or seemingly idiopathic—and then generally amenable to other therapeutic expedients; also the host of functional disorders susceptible to psychic influences, and we are applied with an array warranting a far for optimistic point of view than generally prevails. Not all in neurology depends upon the fate of the dead neuron.

MEDICAL LEGISLATION.

The North Carolina Legislature at its 1909 meeting adopted the following amendment to the Medical Laws:

A Bill to be Entitled An Act to Amend Section 4498 of the Revisal of 1905, Relating to the Licensing of Physicians.

The General Assembly of North Carolina do enact:

Section 1. That section 4498 of the Revisal of 1905 be and the same is hereby amended by adding at the end of said section the following: "*Provided still further,* that the said board may whenever in its opinion the conditions of the locality where the applicant resides are such as to render it advisable, make such modifications of the requirements of this section, both as to application for examination and examination for license, as in its judgment the interests of the people living in said locality

may demand, and may issue to such applicant a special license, to be entitled a 'Limited License,' authorizing the holder thereof to practice medicine and surgery within the limits only of the district specifically described therein. The holder of the limited license practicing medicine or surgery beyond the boundaries of the district as laid down in said license shall be guilty of a misdemeanor, and upon conviction shall be fined not less than twenty-five dollars nor more than fifty dollars for each and every offense; and the said board are empowered to revoke said limited license in its discretion, after due notice. The clerk of the Superior Court, in registering the holder of a limited license, shall copy upon the certificate of registration and upon his record the description of the district given in the license."

Sec. 2. That this act shall be in force from and after its ratification.

It might appear to some, who are unfamiliar with the circumstances under which this law became necessary, that it will result in lowering our present standards and in "letting down the bars," so to speak, so that those desiring license to practice medicine will find means whereby the examinations may be evaded. The fact, however, is that the above is a compromise measure procured to meet a special condition and to evade special legislation in favor of individuals. A work of explanation may not be out of place: In certain remote, sparsely populated sections of our State, especially the mountain section, the people are dependent for medical attention upon men who for one reason or another would be unable to comply with the laws as prescribed. The fact is that it is impossible to induce the more highly educated and thoroughly equipped men to locate in sections where the people at best have but small ability to pay for the doctor's services. In many such places there are doctors who are without license, but who are satisfactory to their patients. Bills were introduced for the purpose of granting special license to these men, a precedent which if established would inevitably result in total eradication of our present standards. While not denying the apparent justness of special relief under such circumstances as we have mentioned, yet there is the danger, unavoidable we believe, that the precedent established would result in special legislation for individuals in sections and under conditions where it would not be justified. These special acts would most certainly have been ratified had not some sort of compromise been effected. As a whole we believe the State Medical Society has been opposed to any relaxation of

the standards set after so much effort; the committee on legislation have likewise deprecated letting down the bars in any manner. But in the face of actually necessity and imminent disaster there can be no question that the matter was handled with great skill and ability. The granting of license in these cases is left in the hands of the Board of Examiners, thus safeguarding the standards won by so many years of hope and labour. The rapid advances being made in all sections of our State along educational, industrial and agricultural lines will ere long have removed the conditions which rendered this apparent retrogression unavoidable.

The medical profession of North Carolina has not been unaware of the efforts made during the past few years to elevate the standards of medical education in this State by the introduction of bills before the Legislature which were intended to increase the requirements relative to preliminary education. It is also a known fact that so far, these attempts have resulted in dismal failure. Apparently amending the Medical Practice Laws is a problem attended in most instances by the utmost difficulty. The legislature as a rule has not only shown considerable disposition to frown upon bills introduced by regular physicians, but a spirit is manifested to favor anything inimical to their welfare. Any sect or set of men whom the so-called regular school appears to oppose seem to find favor in the sight of our lawmakers. Explanation of this attitude is not readily made, although we do believe that the failure of important measures can be explained without great exertion. Perhaps the tendency shown by the legislature, as a whole, to oppose efforts to raise our standards is due to a misconception—a gross misconception truly—on the part of members of the lawmaking body as to the motives which actuate the medical profession in these matters. The ideas which seems to be uppermost in the minds of our Representatives and Senators are that no set of men should be permitted to gain a monopoly on medical practice; that the doctors who are already *in* would put such restrictions round about the qualifications for medical license that others would be kept *out*; that placing the standard higher would have the effect of keeping worthy and capable men from choosing and gratifying an ambition to enter the medical profession. These were the main arguments advanced by those who strenuously and successfully fought the bill introduced before the recent meeting of the General Assembly. As a matter of fact none of these arguments are true, although it might be difficult to convince certain members of

the laity that such utterly sordid and selfish motives are not behind the profession. Few people outside those who compose the medical fraternity are aware of the real conditions which have rendered it absolutely essential and necessary to place heavier restrictions on those who would obtain license to become Doctors of Medicine. Within the past few decades there have arisen here and there throughout the United States institutions which scarcely deserve the name of medical school—mere diploma mills—money making schemes—which possess practically no entrance requirements, fewer facilities for teaching and inappreciable standards. Now there is no one so prejudiced as to believe that a man who has passed through a course of cramming and special preparation which would enable him to answer enough of the questions asked by the ordinary board of medical examiners and thus obtain a pass mark is worthy to practice medicine. The medical examination is at present the only test by which it can be ascertained whether applicants are prepared to treat the diseased human body and at best it is unsatisfactory, but is the only way and at this time we see no promise of a better way. The effect of increasing the requirements for preliminary education would be to either force schools to raise their standards and therefore their efficiency or else go out of business. Of course this argument could have little effect in the case of the schools of this State, but the tendency all over the country is toward better education, better schools, better students, better doctors. North Carolina should not be backward in the trend of progress. The poorer doctor naturally gravitates to his level. We do not want North Carolina to become in any sense a dumping ground. Not that she has been or that the medical profession of this State is not as honorable and well equipped as any to be found anywhere. The point we wish to emphasize is that North Carolina should be in the forefront, as she has ever been and not the last to rise to her opportunities.

There is not a single legislator in our General Assembly who does not have his family doctor at home, not one but numbers among his personal friends and associates a medical man, not one but recognizes the high and unselfish character of the individual medical practitioner. Then why should these men who know doctors attribute to them motives which a clear analysis of their lives and practices must undeniably refute? As we have said this question is not easily answered. But while this attitude is in great measure inexplicable, there is little difficulty in under-

standing why we fail in procuring just and needed amendments to the medical laws. It is because the medical profession lacks a unified and unanimous spirit of organized effort. Doctors are always numbered among the most prominent and influential individuals of any community, but as a rule they give political questions a wide berth. The result is that they have played, and still do play, but a small part in the public life of our country. Perhaps there are good reasons for this, but after all they are chiefly mere personal reasons. Now we believe that if a movement could be instituted among physicians in this State to bring questions relating to medical economics before our legislators in a proper light; to make them realize that such a law as was recently brought before the General Assembly of this State is not a beneficiary measure which affects and favors the medical profession solely, but is a question of the greatest import to the State and country, is not a measure which should be passed simply because a country society here and there expresses itself as desiring it, there can be no doubt but that results would be different. We believe that our legislators oppose our measures chiefly because of misapprehension. It is therefore necessary to attempt some explanation, to justify our motives and then failure will not so often be our lot.

During the recent legislature when the bill was presented to amend the medical laws and add to the present requirements certain educational qualifications, we found the leader of the opposition to be a member from Mecklenburg, the banner county of the State and the county which has the largest number of physicians. Now we believe this gentleman to be one of the best men in North Carolina; he is honest, capable and his integrity is beyond question. But he opposed the bill because of failure to understand the underlying principles which made the measure necessary. The Mecklenburg County Medical Society attempted to influence his position by making known to him that, as a Society, it favored the enactment of the measure. But it failed to make clear its position in the matter. Consequently the gentleman did not alter his attitude. He was not to be turned from what he believed to be the proper line of action merely because a few men expressed their desires—although these men were those who supported him in his own community. On the other hand, had the doctors of Charlotte taken the pains to show how necessary is this increase in educational requirements we cannot but believe that Mr. Dowd would have looked upon the matter quite differently. We would con-

denn no man for his opinions—we admire him for fighting for them—but we would censure the lack of interest on the part of the profession as a whole—a spirit which has long withheld the medical man from becoming a dominant factor in the public life of the community.

STATE BOARD OF HEALTH.

Dr. R. H. Lewis, of Raleigh, who for a number of years has been Secretary of the North Carolina State Board of Health, has resigned. At the recent meeting of the Board in Raleigh his resignation was sent in to take effect July 1st, '09. This step on Dr. Lewis' part is much regretted by the Board. He has long ago proved his qualifications and during his term of office the efficiency of the State Board of Health has been wonderfully increased. In fact its influence and work has been raised to such a point that the Board of Health is now a powerful factor in the economic and sanitary life of the State. We would give Dr. Lewis full credit for the part he has played. With but small pecuniary remuneration he has given time and labor unstintedly; and his work and his influence has been productive of great good. However the provision made by the legislature for greater appropriation and enlarged powers for the Board demanded that the secretary should give his entire time to carrying on the work of this department. To Dr. Lewis this was impossible. His large practice, to say nothing of his many outside interests, would preclude his doing this. Much to the regret of the other members, and since he could not see his way clear to continuing his secretaryship, his resignation was accepted. The Board then elected Dr. Watson S. Rankin of Wake Forest to succeed Dr. Lewis. Already not unknown in his home State because of his recognized abilities and because of his prominent connection with the medical school of Wake Forest College, Dr. Rankin will fill the place with ability; he will honor his office and is honored to have been selected to fill such an office. Indeed, leaving out these considerations, to succeed a man like Dr. Lewis is of itself an honor of no small importance. The new appropriation brings to the secretary a salary of \$3,000 per year.

STERILITY IN WOMEN.

When called upon for opinion in illness, the physician weighs the evidence at hand in the form of symptoms and deducts his conclusions from these observations. The patient individually is most concerned, although the deductions of the physician will be influenced by outside factors, such as family history, environment, occupation, age, etc. But when a woman presents her-

self for an opinion as to her state of sterility, two factors must at once be considered—the male and the female. If moderate in degree, no matter what pathologic conditions are discovered in the female generative organs, the opinion that such and such a condition is the cause of the sterility cannot be conscientiously expressed until the male partner also is examined as to his ability of procreation. A woman may suffer with retroversion, leucorrhoea, fibroids, tubal or ovarian disturbance, or a combination of pathologic conditions, and yet be capable of conception. Our duty towards these cases is not fulfilled by simply saying you have a retroversion or tubal disease and your sterility depends on this. She is entitled to a conscientious opinion. The male partner should also submit to an examination. Has he spermatozoa or not? Is he capable of performing his function properly, are questions at issue? If he is competent and a sterility exists, then the woman's condition can be looked upon with suspicion. But even under these conditions we must be careful in placing the full blame of the sterility on her alone, because our knowledge of the whole function of procreation is very incomplete. Were a careful examination made of the husband in all cases of sterility there would be less false accusation and blame endured by women-kind and less mental injury inflicted on women who already suffer so much mentally from self-blame. A case in point is one of an intelligent, sensitive woman, who presented herself with a metrorrhagia of 38 days standing. This sanguinous flow began after a four months amenorrhoea. Examination revealed a fibroid of considerable dimensions with a suspicion of a pregnancy verified later by a spontaneous abortion. For over 12 years this woman blamed herself of being incapable of procreation, finally demonstrating her competency by a conception even in the presence of a fibroid. Who knows but the husband should have borne the blame all those years. Another case in point is a woman who had a moderately severe attack of gonorrhoea contracted from her husband. Her sterility was considered to be depending on the pathologic condition in her generative organs. She bore her suffering for many years, and finally after 9 years conceived twice and bore two healthy children. Here, too, on account of a failure to examine the male partner at the time the woman was examined for sterility one remains in doubt as to the true cause of a nine year sterility. Was the male competent during these nine years, or was the sterility due entirely to the pathologic condition of the generative organs of the woman? It is not always practicable or feasible to

make an examination of the male when the woman applies for an opinion as to the cause of her sterility, because one fears to disturb domestic relations by engendering suspicion of the husband's incompetency. Nevertheless it cannot be denied that an honest opinion cannot be expressed in these cases unless the husband is also examined.

Attempts to produce anti-sera with the endotoxin bacteria such as typhoid, pus cocci, pneumococci and other species which produce soluble toxins (like the tetanus and diphtheria organisms) have so far failed except perhaps in the case of Flexner's *Meningococcus* anti-serum.

Even this Flexner serum may really depend upon its power of carrying opsonins upon or stimulate phagocytosis. Its limitations however, are definite. Such anti-sera still lack a toxin neutralizing body or a complementary body to activate the immune body. In the infected patient complements cannot be furnished by fresh normal serum, but must come from the plasma or cells.

There is some evidence to show that the intermediary or immune bodies are often in excess and free in the blood stream, yet inactive and powerless against the *causis morbi*, because the complement is missing.

Neither the complement (cytase) nor the opsonin has been shown free in the circulating blood,

Hiss, in the November Journal of Medical Research has attempted to test Metchnikoff's contention that the micro and macro cytases are contained in the leucocytes. The latter claims that the complementary substances are only free in the plasma during injury or in stress of death. Unusual events which lead to loss of fluids in the leucocyte cell or its destruction, lead to a combination of the leucocytic products and the plasma bodies. Thus are the invading germs killed.

Hiss concludes from his studies that besides phagocytosis, when this fails, these ingesting cells are in turn taken up, plus their toxic contents, by other scavenging cells. These latter prevent the liberation of noxious detritus, and thus constitute a second line of defense to the specialized body cells.

The polynuclears are of the first class. These, when they are but partially a success, are gathered up by the mononuclear reserve corps.

An observation in Hiss' laboratory leads him to assume that the phagocytic power of the white corpuscles was by no means a constant in infected individuals. There is first a depression of their activity; as the

animal regained the normal, the phagocytes take the gradual exaltation of function.

This is probably true that it has not been proved.

Hiss attempts to prove further that the introduction into the infected individual of substances which compose the chief cells (or all the cells of an exudate) might serve to neutralize the poisons. Or they might alone or in combination, act deleteriously on the bacteria and thus augment the power of the flagging leucocytes by supplying them with their own weapons.

Further the extracts of such leucocytes and exudates from previously immunized animals might even better serve this purpose.

He found that with extract of leucocytes, nine rabbits with what is usually a fatal pneumococcus infection, lived out of twelve inoculates. Some of these were injected with leucocytes as late as twenty-four hours afterwards the cocci were given.

With meningococcus infections, all the controls died. Of thirteen treated animals, nine recovered.

Evidently from Hiss' work, another great healing light is rising over the medical horizon. Knowing the limitations and availability of Wright's vaccine opsonic therapy, we cannot but feel that Hiss has added another large link to the biological chain of modern therapy.

Editorial News Items.

Dr. Chas. W. Stiles, of Washington, D. C., on the evening of April 3rd, delivered a most interesting and instructive lecture at the North Carolina Medical College, Charlotte, N. C., before the students and faculty of the school, the doctors of Charlotte and the nurses of the various hospitals of the city. His address was illustrated by lantern views showing the development of the hook worm, its effects on the organism and its modes of transmission. Dr. Stiles is emphasizing quite an original phase of the race problem. He forcibly brings to his hearers the medical aspects of the problem and demonstrates beyond question the relation which the negro plays in the prevalence of the diseases and the high death rate of the South.

Dr. Stiles was on his way to New Orleans where he delivered a series of lectures before the medical classes of Tulane University.

At Fitzgerald, Ga., the Irwin and Ben Hill County, (Ga.) Medical Society held its annual election of officers, March 30, with the following result: President, E. J. Dorman; vice-president, J. W. Dismuke; sec-

retary and treasurer, L. S. Osborne; censors, E. A. Russell, C. W. Ashley and J. C. Fussell. Several new members were added to the society.

Suit to recover damages to the amount of \$20,000 has been filed by a former patient against Dr. W. T. Rushin, a prominent physician, of Macon, Ga., and proprietor of the Vineville Sanitarium of that city. The plaintiff alleges that she was permanently injured by a treatment given her at the Sanitarium for rheumatism.

A campaign has been started in Montgomery, Ala., to do away with all unsanitary outhouses that are within reach of sewerage. This effort, if effective, means much to the city sanitation.

The Georgia Travellers' Association, at a recent convention in Atlanta, adopted plans for the maintenance of a hospital for commercial travellers by annual dues, with both free and paid wards, which will be free to members of this association, and for the care of all commercial travelers who happen to become unfortunate in the State and need the assistance of fellow travelers.

Dr. R. M. Cunningham, of Birmingham, Ala. formerly Lieutenant-Governor, will probably be in the coming race for Governor of his State.

Dr. Watson S. Rankin who has for several years been at the head of the school of medicine of Wake Forest College, (N. C.) has been elected secretary of the North Carolina State Board of Health. He will, after July 1st, devote his entire attention to the duties of this office.

The Alabama State Medical Association will hold its annual meeting in Birmingham, beginning April 20th, and continuing four days.

The annual convention of the Georgia Medical Society, will be held in Macon, April 22.

Twenty-three cases of smallpox were reported as being treated in the emergency hospital in Montgomery, Ala., on April 1st.

Dr. Wm. B. Summerall has assumed charge as the head of the Grady Hospital, Atlanta, Ga. He will introduce several changes in the management of the work of the institution, among which will be the addition of two internes to the staff, making the number ten, instead of eight as heretofore,

The Medical Department of the University of North Carolina will hold its graduating exercises at Chapel Hill, June 1st, in connection with the regular commencement of the University. The address before the graduating class will be delivered by Dr. Wm. H. Welch, Professor of Pathology at Johns Hopkins University.

At the preliminary hearing, Dr. W. L. Noel, a prominent physician and druggist, of Boaz, Ala., who is accused of having killed Marshal Roberts of the same town, was denied bail and remanded to jail to await the action of the grand jury. Dr. Noel is sixty years of age and it is said the evidence is strongly against him.

The Fight Against Tuberculosis in Georgia.

The anti-tuberculosis campaign was begun in Georgia on March 27th, with an exhibition under the direction of Dr. E. G. Routzahn, who represents the National Association for the Study and Prevention of Tuberculosis and who has been most actively engaged in the work in the Southern States recently. Headquarters have been opened and a most vigorous effort is being made by lectures and the distribution of printed matter to arouse the people of Atlanta and of the whole State.

This campaign of education is essentially an enterprise of the city and of the State, and is conducted by committees of representative men and women alive to the highest interest of the community in which they have cast their lot.

Importation of Opium Restricted.

Since April 1, neither opium nor any compound containing or representing opium in any form can legally be brought into the United States or any of its outlying possessions except for strictly legal purposes. Carrying into effect a law passed at the last session of Congress embodying this restriction, the Secretary of the Treasury has issued regulations in which it is declared that the term "opium" shall cover all of its forms, including the following named alkaloids, their salts or combination, and such others as it may be found necessary to include in the future. Morphine, codeine, dodeine, diacetyl, heroin, peronine, thorchlorides, sulphates, phosphates, etc., and all mixtures or preparations containing them.

The term "for medicinal purposes only" used in the law is declared to mean for the treatment of prevention of disease of man or other animals.

Smoking opium will be seized forthwith and destroyed as an illegal importation.

Opium other than smoking opium and its preparations and derivatives, imported for medicinal purposes, may be entered for immediate transportation in bond to and for consumption or for warehouse at the specifically named forts.

Internes for Charity Hospital, New Orleans.

On competitive examination for internship at the Charity Hospital, New Orleans, a service of two years duration, the following young men have been announced as the successful applicants: E. P. A. Ficklin and W. A. Love, of New Orleans, S. P. Wise, of Plains, Ga., J. B. Larose, E. N. Landry, E. L. King, T. I. St. Martin, M. J. Gelpi, Earle Brown, F. M. Faget, Henry Leidenheimer of Louisiana, C. M. Horton of South Carolina, and J. A. Newman and D. C. Donald of Alabama.

Preparing for State Society Meeting.

The Asheville doctors evidently intend that their guests, the members of the State Medical Society, which meets in June, shall find them ready to entertain them. From recent reports they are making already elaborate preparations and laying plans, and if these reports are to be believed the occasion will be made doubly enjoyable by features which are original and unique.

At a meeting of the Buncombe County Medical Society held April 5, these plans were discussed: One of the entertainment features will be an old-time barbecue of Overlook Park. The last time the society met in Asheville a barbecue was tendered the visiting doctors and the affair was greatly enjoyed and one of the most interesting features of the meeting. Special cars will be operated for the convenience of the doctors and their guests, and it is purposed by those in charge to make the affair thoroughly enjoyable.

It was also announced that Dr. Charles L. Minor and Dr. James A. Burroughs will entertain the State society at their homes during the annual convention. Special rates will be made by the railroads and hotels for the occasion. There is every reason why this shall be a most successful meeting. The mountain city has many attractions. We prophesy a good attendance.

Guilford County Medical Society Banquet

An event of considerable importance and certainly of very great interest to those who were fortunate enough to attend was the elegant banquet to which the members of the Guilford County Medical Society treated themselves on the evening of April 1st.

A meeting of the society at 2:30 P. M. at the rooms of the Manufacturers Club in High Point, N. C., was followed by the Banquet at the Elwood Hotel, beginning at 6 P. M. and continuing into the late hours of the evening. This event was largely attended by members of the society. The programme as presented below will bear witness to the statement that something was said which was worth hearing. A large number of invited guests participated in the spread and took part in the scientific discussions. Guilford has one of the liveliest and most enthusiastic of all the county societies in North Carolina, composed as it is of doctors who stand in the front rank of the profession. The program was as follows:

Dr. J. Allison Hodges, Richmond, Va. "The Possibilities of Preventive Medicine."

Dr. J. Howell Way, Waynesville. "The Need of State Legislation for the Betterment of the Profession and the People of North Carolina."

Dr. L. B. McBrayer, Asheville. "State Medicine."

Dr. C. R. Hudson, State Manager U. S. Farm Demonstration Work. "Relation of Agriculture to Civilization."

Dr. Albert Anderson, Raleigh. "The Medical Side of Life Insurance."

Dr. E. T. Dickinson, Wilson. "The Trials of a Young Surgeon."

Dr. J. P. Campbell, Atlanta, Ga., U. S. Supervisor of Agriculture work in the South. "Teaching Agriculture in the Public Schools."

Dr. C. M. Strong, Charlotte. "End Results of Surgery."

Dr. H. T. Bahnson, Winston-Salem. "The Ethical Physician."

Dr. J. C. Walton, Richmond, Va. "North Carolina."

Dr. W. W. McKenzie, Salisbury. "Classical Qualification for Applicants to Practice Medicine."

Hon. Wescott Roberson, High Point. "Medical Jurisprudence."

Dr. Fred Peacock, High Point. "A Business Man's View of the Medical Profession."

Mr. J. J. Farriss, High Point. "The Duty of the Press to the Profession."

Dr. C. W. Moseley, Greensboro. "The Evolution of Medicine."

Dr. W. G. Bradshaw, High Point. "The Medical Profession as Seen by the Ins and Outs."

Dr. J. W. McGehee, Reidsville. "Relation of the Medical Profession to the Public."

Dr. John Roy Williams, Greensboro. "The State and Tuberculosis—The State Sanatorium."

Dr. J. R. Gordon, Jamestown. "The Doctor as a Legislator."

Dr. H. H. Dodson, Greensboro. "Why Dr. John Brown was a Success as a Physician."

Dr. J. A. Turner, High Point. "The Baby."

Dr. M. F. Fox, Guilford College. "Anything You Want to Talk About."

Dr. W. M. Jones, High Point. "The Prevention of Tuberculosis."

Dr. C. E. Reitzel, High Point. "The Importance of Diagnosis."

Dr. D. A. Stanton, High Point. "Why Dr. Jim Smith was a Failure as a Physician."

Southern Railway Surgeons.

The fourteenth annual meeting of the Association of Surgeons of the Southern Railway was held in the city of Jacksonville, Fla., April 6 and 7, 1909. Reports indicate that the meeting was an unusually good one, was largely attended and marked by great enthusiasm. Two hundred and fifty members answered the first roll call and it is said that fully four hundred people were in attendance.

The association consists of all surgeons of the Southern Railway and allied lines, who meet annually to discuss matters of interest pertaining to their professional duties. A very attractive program was arranged, and many interesting papers were read before the convention.

The officers of the association were, president, B. G. Copeland, Birmingham; vice-president, H. T. Bahnson, Winston-Salem, N. C.; vice-president, J. H. Shorter, Macon, Ga.; historian, George Ross, Richmond, Va.; and secretary and treasurer, J. U. Ray, Woodstock, Ala.

Dr. Jay H. Durkee, of Jacksonville, was chairman of the committee on arrangements, and all will bear ample witness that he did not neglect his duties.

Call to order by Surgeon Jay H. Durkee, chairman of arrangement committee.

Prayer—Rev. Van Winder Shields.

Address of Welcome—Hon. W. H. Sebring, mayor of Jacksonville.

Response to Welcome—Surgeon George M. Burdett, Lenoir City, Tenn.

Report of committee on arrangements.

Introduction of president.

President's Address—Surgeon B. G. Copeland, Birmingham, Ala.

Reports of committees and officers.

The papers and the discussions called forth showed that the men who compose this association are doctors of the very best and highest type. In fact it must be admitted that the railway surgeon is, in the vast majority of cases, among those who

stand at the very head of the medical profession

Many pleasant social features added to the entertainment of the visitors. A number of the doctors and members of their families extended their trip to Cuba.

Dr. W. A. Applegate, chief surgeon, was presented with a handsome Howard watch by the members of the association. The officers elected for the ensuing term were as follows:

President, Dr. Charles H. Starkel, Bellville, Ill.

Vice-President, Dr. Jay H. Durkee, Jacksonville, Fla.

Vice-President, Dr. H. W. Blair, Sheffield, Ala.

Secretary and treasurer, Dr. J. U. Ray, Woodstock, Ala., reelected.

Member executive committee, Surgeon Oculist, George H. Stubbs, Birmingham, Ala.

Before adjourning a rising vote of thanks were extended to Mayor W. H. Sebring for his welcome to the city; Dr. J. H. Durkee, chairman of the committee on arrangements; Rev. Mr. Van Winder Shields, for his valued assistance in making the meeting a success; the press of the city for their courtesy in reporting the proceedings of the convention; the local lodge of Elks, and in fact to every one who contributed towards making their stay in Jacksonville a pleasure.

Dr. M. D. Hoge, Jr., of Richmond, Va., who is well known to the medical profession and who possesses a most enviable reputation, has decided to limit his practice to the Diagnosis and Treatment of the Diseases of the Kidneys, Heart and Lungs, and other clinical and laboratory research work relating to pathological tissues, excretions. Dr. Hoge needs not that we indulge in any favorable emanations in his behalf. His work is already recognized as being of the very highest type. His offices as formerly are located at 308 East Grace Street, Richmond.

The Washington and Tyrrell Counties Medical society met in Columbia, N. C., April 5, at the office of Dr. Spruill. The members present were: Drs. Hassell and Hardison of Creswell; Drs. Spruill and Stoncell, Columbia; Dr. Halsey Roper, Dr. Wood, Plymouth. Invited guest, Dr. D. F. Taylor, Washington, D. C.

After the general routine of business Dr. Taylor read a very interesting paper. At 11 o'clock they repaired to the residence of Dr. and Mrs. C. B. McKeel, where they

were entertained at a delightful buffet luncheon, given in honor of the guest of the society, Dr. D. F. Taylor.

Dr. M. R. Farrar, formerly of Greensboro, N. C., has recently removed to Nashville, Tenn., where he has purchased the interest of Dr. E. F. Hayden in the Hayden and Brown Sanitarium. The institution is known as the Farrar and Brown Sanitarium and is conducted in a strictly ethical manner, under the personal management of Drs. Farrar and Brown, for the treatment of alcohol and drug addictions of every character, also diseases of the mind and nervous system.

We wish Dr. Farrar well in his new field.

Raleigh, N. C., will soon have completed two new hospital buildings. Rex Hospital which is the city hospital, will occupy its new quarters in the autumn. The new building will contain accommodations for about 60 patients, and only white patients. In the past there was a ward for colored patients:

St. Agnes' Hospital, exclusively for colored patients, is also ready to be installed in its new buildings which have a capacity of seventy-five beds.

Chattanooga Medical College.

The graduating exercises of the medical department of Chattanooga University will be held April 26. The senior class, which numbers twenty-four members, is composed of the following young men:

D. L. Adams, Virginia; W. T. Allen, Alabama; W. M. Bright, Tennessee; L. T. Brumley, Tennessee; P. C. Chadwick, Alabama; E. O. Depew, Tennessee; E. E. Delaperriere, Georgia; J. H. Germany, Georgia; S. P. Gardner, Virginia; J. S. Holt, Tennessee; B. C. Hale, Georgia; J. D. Leonard, Tennessee; J. S. Miller, Alabama; W. W. Mitchell, Texas; G. W. McGowan, Mississippi; J. A. Partridge New York; W. C. Perrow, Virginia; Henry G. Smith; Georgia; B. F. Stark, Georgia; B. I. Vann, Tennessee; G. W. Willis, Alabama; E. J. Whitcomb, North Carolina, and C. B. Bailey, West Virginia. Of the above J. A. Partridge and Henry G. Smith are residents of Chattanooga.

San Francisco Again Triumphant.

San Francisco on March 31, celebrated officially, the close of the campaign against bubonic plague by giving a public dinner to Dr. Rupert Blue, of the United States Public Health and Marine Hospital service, as an expression of appreciation of his effective services in the sanitation campaign

to eradicate the plague in San Francisco, and to celebrate the successful conclusion of that work. The whole country will join in thanking Surgeon Blue and in felicitating all municipal as well as Federal officials on their successful achievement. It was a fight waged for the benefit of the whole country, threatened by the temporary lodgment of the plague at the portal of the Golden Gate.

Mayor Taylor on behalf of the citizens of San Francisco, gave Dr. Blue a handsome gold watch, bearing an inscription of recognition for his services to the city.

Approximately one million rodents were slain in the effort to wipe out the plague.

The campaign was directed to killing off rats, disinfecting premises and ships where these plague-infected rats had been found, and preventing the breeding and spreading of the pests. Up to June 30, 1908, there had been 159 cases of plague and 77 deaths. It is now authoritatively announced that "the last human case of bubonic plague found in San Francisco was a year ago last January; the last infected rat was found last October." Vigilance in measures of prevention was not, however, relaxed. Rigorous sanitary precautions have been enforced up to the present time. It is now believed that every vestige of the terrible Oriental scourge has been extirpated.

Tulane Medical Department—Extension Course.

Dr. C. W. Stiles, of the Hygienic Laboratory of the U. S. P. H. and M. H. Service, Washington, D. C., on April 5, 6 and 7, delivered a series of lectures and laboratory demonstrations before the students, and alumni of Tulane, the medical profession and interested public of New Orleans. His lectures and demonstrations included the following:

Hookworm Diseases and Malaria.—Nature, cause, treatment, prevention, (Lantern Slide Demonstrations).

Laboratory of Pathology and Clinical Medicine. Demonstrations.

Soil Pollution in the South and its role in increasing the death rate, especially in connection with Hookworm diseases and typhoid fever. (Lantern Slide Demonstrations).

Laboratory Demonstrations.

Unsanitary life of the negro and his influence in spreading Hookworm disease, typhoid and malaria. (Lantern Slide Demonstrations).

Present conditions of the tenant white classes of the South due largely to medical influence of the negro, hence a betterment of existing conditions is largely a medical problem. (Lantern Slide Demonstrations).

This is a splendid feature of the Tulane medical department. These courses of lectures add greatly to the already very superior advantages of the school. During the week April 12-17, Dr. F. Creighton Wellman of Washington, D. C., delivers a series of lectures which are well worth hearing.

Deaths.

Dr. R. T. Baird, a physician of Fredericksburg, Va., became violent while on a Southern train between Atlanta, Ga. and Jessup, and claiming that he was being shot, stabbed himself in the chest with a pair of scissors, then attacked several of the train men. When the train reached Jessup, on the morning of March 10th. Dr. Baird was found dead in his berth.

Dr. Samuel Pleasants Christian of Richmond, Va., died March 28th, in the eighty-ninth year of his age.

Dr. Wm. Augustine Daniel died April 7th, 1909, at his home in Jacksonville, Fla. aged seventy-five years. At the close of the civil war, through which he served. Dr. Daniel studied medicine at the University of Maryland.

Dr. J. J. Lawrence.—The death of Dr. Joseph J. Lawrence at his home in New York on March 14, has removed from the world of Medical Journalism one of its most conspicuous figures. The founder and, for thirty-four years' editor and owner of the *Medical Brief* Dr. Lawrence was perhaps the oldest editor of a medical journal in this country, and certainly one of the most powerful exponents of independent journalism, when two years ago declining health forced him to relinquish all business cares and responsibilities.

It will be interesting to the profession of North Carolina to know that Dr. Lawrence was himself a North Carolinian. Born in Edgecombs county in 1836, he established the *Medical Brief* in Wilson, N. C. in 1873. After a few issues of this journal he removed to St. Louis, Mo., where he soon found a large field for his chosen work. But few years of his life were spent in active practice, his inclinations led him naturally into editorial work for which he possessed special fitness and ample qualifications. Always independent, a pronounced individualist, he asserted his right to think and act as he pleased; yet he accorded to every other man the same freedom of thought and action. Thoroughly imbued with this spirit he was opposed to all forms of paternalism and to all socialistic tendencies; he never affiliated with a secret so-

ciety and association of any kind, whether medical or otherwise. Though his life was marked by fierce antagonism, there was no bitterness in his nature. Calm, stern and unyielding once his mind was fixed he remained until the end of his life the man of sterling integrity and passing he has left no blot, no stain, upon his escutcheon.

Review of Southern Medical Literature

Texas Medical Journal, February, 1908.

Acute Mastoiditis—Early Operation a Necessity for Patients Safety.—Dr. R. E.

Moss says that where there is a chronic otorrhea and acute symptoms occur, with pain and tenderness over mastoid, we should operate at once. These cases give us a high death rate as compared to those of the first attack. They seem to be followed by brain abscess, sinus thrombosis and meningitis more frequently. The death rate following this class of cases is placed as high as 20 to 25 per cent. Just why any one should advise delay when the diagnosis is made is hard to understand. The early operation is so simple and safe, and the convalescence so satisfactory as compared to delayed cases. The same can be said of appendicitis, in early operations where there are no complications, in the hands of skillful surgeons, there is practically a hundred per cent. of recoveries, whilst in delayed cases the same men have from 10 to 20 per cent. of fatalities. It is the skillful men in the surgical world who are pleading for early operations. Our first duty is to our patient, and his welfare to be considered, and our own reputations second. It does not matter, however, how skillful or thorough our operation, if the patient dies there are many ready to condemn and cast doubts upon surgeons and surgery generally. It is the number who die from delayed operations, and at the hands of indifferent operators, that causes a great many to postpone and debate the question whether their chances would not be better without an operation.

Diabetes Mellitus.—Dr. J. C. Denston prescribes the following:

R Sulphuric acid gttss. x to xx t. i. d. in large glass water immediately after meals. Saliodin grs. xv to xx in water or kouseals twice a day—half way between breakfast and dinner, and half way between dinner and supper. The patient may continue the carbohydrates with his food and yet expect a cure from the above prescriptions.

Sulphuric acid oxidizes the carbohydrates within the animal economy, splitting them up by its reagent qualities into carbonic acid and water, while the saliodin acting

upon the stigmata and viscera within the body, the blood and the emunctories restores every function to normal, each ingredient within the compound playing well its part. The salicylate acting as a solvent to the urates and other poisonous compounds. The iodine as an all-efficient eliminant of these poisons from the blood. The acetate acts as a diuretic, flushing the kidneys; the aconite allaying inflammation and controlling fever and thirst; the bryonia acting on the serous and the colchicum on the synovial membranes, while the capsicum and gaultheria aid the salicylate and colchicum. Attention must be given to the bowels. If constipation exists, diabetic coma may supervene.

In the usual treatment of diabetes mellitus when the carbohydrates are withdrawn too long from the food, the proteids split up into carbohydrates, while there are formed from the proteid and fatty foods certain toxic acid substances, such as oxybutyric and diacetic acids, which abstract alkalies, chiefly ammonia, from the tissues.

Gaillard's Southern Medicine, Feb., 1908.

The Diagnostic Indications of Uterine Bleeding.—Dr. S. S. Graber says that once in a while a practitioner will encounter a condition of peculiar odor, an odor if once learned will not be easily forgotten, of a consistency somewhat slimy, dark in color, not readily given to coagulation, probably not too profuse. With such data he will not be far wrong in making at least a tentative diagnosis of dead fetus in utero. The temptation here would be to at once empty the uterus. But right here lies some danger, especially if that fetus happens to have been dead for some time. Contrary to the cases of incomplete abortion, so long as the membranes are intact these women will do better if allowed to throw the uterine contents off en masse, which she will usually do promptly.

The bleeding due to ectopic gestation and pyosalpinx is quite similar, and yet often distinct enough to be fairly evident. They are both mucous-like and dark, but in the ectopic there are apt to be shreds, while that of pyosalpinx contains more true blood.

The one instrument that finds its way to these cases very often, and not without detriment to the patient, nor worry to the doctor, is the curette. It stands to reason it has no place in either class, and we must say here that enough can be inferred from the character of the discharge to at least arouse suspicion.

In fibroid tumors the hemorrhage is generally of a brighter red and may or may not be very profuse, and here again clotting does not take place with anything like the

readiness it does in parturient cases, whether in abortion, placenta previa or post partal.

Tuberculosis of the Bladder.—Dr. N. Karo believes that in cases where a tuberculosis of the bladder has been fully developed, the prognosis will depend upon the possibility of removing the diseased kidney. Should the other kidney be sound, or at least be able to functionate, the diseased kidney must be removed at once even if considerable portions of the bladder are affected. We have again and again become convinced that by nephrectomy even advanced cases of tuberculous bladders will heal without any special treatment.

Of the many clinical remedies recommended for local treatment of the tuberculous bladder, sublimate has always proved to be the best and most reliable. We commence with a very weak solution, say 1 to 10,000, gradually increasing to 1 to 3,000. Distension of the bladder should be carefully avoided. We inject from 20 to 50 com. of the sublimate solution through a very thin catheter and induce the patient to retain it as long as possible. By giving morphine and by warm sitz baths, we alleviate the pain caused by the sublimate. Hollaender recommends giving the solution in statu nascendo, which is done by the patient taking iodide of potassium internally and injecting calomel into the bladder. We applied this mode of treatment in a number of cases, but found it a great deal more painful without being more effective.

New Orleans Medical and Surgical Journal, February, 1909.

Tumors of the Penis and Testes.—Dr. J. Lazard gives the following summary:

It is possible to make an exploratory incision of the testicle, the same as any other organ, without harm to its structure or function.

In the solid swellings of the testes, unless the attending surgeon is sure of his diagnosis, which is impossible at times, it is not only best, but imperative to administer iodide of potash ten days or two weeks before rendering a final opinion.

In all cases with symptomatic hydrocele, it is advisable to empty the fluid with a trocar before administering iodide of potash, in order that the growth may be more accurately observed.

Before closing, I wish to state that my mission in writing this paper and which I regard as my sole duty is to impress the members present tonight with:

1st. The benefit of iodide of potash in all tumors of testes, and I suppose in other regions of the body. Its judicious use has saved me from many heart-burnings.

2nd. To express a long entertained and well fortified belief that malignancy of the penis, when treated early and radically, offers more hope for permanent recovery than in any other region of the body.

Tumors of the Female Pelvis.—Dr. L. Perrelliat says that 1909 marks the centennial anniversary of a great event in the history of the development of modern gynecology. In the city of Louisville, nearly one hundred years ago, the great McDowell, pioneer gynecologist led the way to general surgeons in opposition to the conservative sentiment of his time, and prepared the way for the development of all intra-peritoneal surgery, with its marvelous capabilities for lessening human suffering and saving life. Numerous other men in different parts of the country have followed the way blazed by him, and in their own respective limited fields of endeavor have contributed to the advancement of this branch of medicine and surgery.

A remarkable improvement recently is the result of the influence of two sets of causes: First, those resulting from the improvement in technique, from greater experience of the operators, better trained assistants and a better understanding of the after treatment. The advent and the popularizing of the absorbable animal ligature has made ligation of tissue en masse a thing of the past, so that post operative hemorrhage from the slipping of ligatures is now extremely low. A cat-gut ligature has to be placed on the isolated vessel, and a moderate amount of pressure, by breaking the intima of the vessels secures the formation of a blood clot which makes hemostasis prompt and positive.

Greater familiarity of the operator with the pathological anatomy also minimizes the danger of some of the inevitable complications of the operation. The tying and cutting of the ureter, accidentally, is practically eliminated.

cases suppuration continues, as a rule, for several weeks, and before a secondary operation could safely be done the patient is homesick, weakened physically by confinement, and depleted financially by the expenses incident to his stay in the hospital. Experience seems to show that if subsequent trouble develops the infection is not usually acute, and pus, if is formed, is it walled in by old adhesions. Therefore, I think that the surgeon does his duty if he makes it clear to the patient that, owing to the complications which existed, it was not found safe to remove the appendix, and tells him that while a second operation is advisable, it is not imperative unless he has tenderness over the incision, colicky pains in the bowels or persistent digestive disturbances, in any of which instances it is distinctly necessary for him to promptly seek surgical assistance.

Tumors of the Bladder.—Dr. A. L. Fowler believes that this treatment requires suprapubic cystotomy, and would be impractical by the perineal route. In this connection he mentions briefly a new suprapubic operation which he recently saw done by Professor Felix Legueu, of Paris. The suprapubic incision, down as far as the bladder, was done in the usual way. When the bladder was reached it was opened transversely, and its cut surface stitched with retaining sutures to the abdominal incision, which was, to all practical purposes, a delivery of the bladder. The method is of great advantage, because it gives a comparatively spacious field to work in. At this particular operation, which was for a tumor of the bladder, the base of the tumor (pedunculated) was ligated with as many chronicized sutures as was necessary, and the tumor was then removed with scissors, and the mucous membrane approximated with fine catgut sutures. The bladder was closed, also the abdomen, without drainage.

Southern Medical Journal, February, 1909.

Atlanta Journal-Record of Medicine, Jan., 1909.

The Question of the Necessity of a Second Operation for the Removal of the Appendix in Cases where an Appendiceal Abscess has been Treated by Simple Incision and Drainage.—Dr. Stuart McGuire believes that the appendix should always be removed at the first operation if the abscess is small and not adherent to the abdominal wall beneath the incision. It should be left only in neglected cases, where the abscess is large and attached to the parietal peritoneum. When this condition exists the appendix is usually gangrenous, undergoes liquefaction, and is eliminated with the discharges. In such

Complications of Gonorrhoea in Women.—Dr. F. G. Hodgson says consider for a moment that the gonorrhoeal mother has escaped the numerous complications and has born a fairly healthy child, and you have prevented ophthalmia by Crede's method she still is not safe. The gonococci may have remained latent so far but the uterus in the puerperal state forms a favorable medium for the growth and spreading of these germs. About the fifth day post partum or later we find a rise in temperature, pain and tenderness in the pelvis. The germs have ascended and attacked the

tubes, and the chance for more children is gone? This has become so prevalent that we have the condition known as "one child sterility."

There is still another and more serious complication of gonorrhoea; besides the local manifestations of the disease the germs may enter the general circulation and produce a true bacteraemia. This may manifest itself as an inflammation in a joint and is known as gonorrhoeal rheumatism; or a true septicaemia may develop and the cocci attacking the heart valves produce a gonorrhoeal endocarditis which is usually fatal. A few cases of pyaemia with metastatic abscesses, phlebitis, pleurisy, and meningitis, all of gonorrhoeal origin, have been reported.

Dr. Alex. Doctor says that venereal diseases are more serious than cancer or tuberculosis, for they produce more suffering and cause more deaths.

Adenoids.—Dr. Ridley believes that for this operation as in all operations, the patient should be prepared by giving a laxative the night before, and nothing to eat within four hours of the operation. A general anæsthetic should by all means be used when not contraindicated and this pushed to completely narcosis where the pharyngeal muscles will be a state of relaxation. The choice of the anæsthetic is left to the experience and choice of the anæsthetist.

The important points are:

1. The early diagnosis and treatment of adenoids.
2. The absolute necessity of using a general anæsthetic.
3. And thorough removal of all hypertrophied tissue by the use of the curette and finger.
4. Care in not wounding the eustachian tubes and at the same time clearing the fossae of Rosenmüller from all the adenoid tissue.

Virginia Medical Semi-Monthly, Feb. 12th, 1909.

Suturing in Trachelorrhaphy.—Dr. J. W. Hunsley says that in examining the results after trachelorrhaphy by the usual technique, where the sutures are introduced so as to include a little of the mucous membrane at each margin of the denuded surface, we often notice that the wall of the cervix in the line of the union is decidedly thinner than elsewhere.

When a suture, which does not engage the mucous membrane, is tied, there is less infolding of tissue because there is less in its grasp and consequently there is better approximation of the central part of the fibromuscular coat.

As this coat is closely adherent to the mucous membrane, the margin of the latter will be sufficiently approximated for union when the former is brought together by sutures. Thus we get a thicker wall at the line of union.

The Bronchoscope in the Diagnosis and Treatment of Disease.—Dr. R. H. Johnson draws the following conclusions:

With practice the introduction of a rigid, straight tube into the trachea and bronchi is not difficult.

The bronchoscope can be introduced in nearly every adult case under local anaesthesia.

The hypodermic injection of morphia and atropia is a great help for the successful manipulation of the tubes and for drying up secretion.

The mucous membrane of the trachea and bronchi is seen as clearly as is the mucous membrane of the throat with the head mirror.

When we succeed in convincing the profession that tracheo-bronchoscopy is a valuable means of diagnosis, great advances in the living pathology of the tubes and even of the lungs will certainly follow. The tertiary bronchi can be seen with a good light.

Tracheo-bronchoscopy is just as valuable in the diagnosis and treatment of diseased conditions as in the removal of foreign bodies.

Virginia Medical Semi-Monthly, Feb. 26th, 1909.

Some Further Applications of the Fowler-Murphy Method.—Dr. Southgate believes that in puerperal infection his method is of special importance and does great good. The uterine cavity drains better, and septic fluids in the pelvis are kept from spreading. The usual treatment by intra-uterine douches, ice-bags and free moving of the bowels is greatly aided by the elevation of the head of the bed. Where pus forms and drainage is resorted to, the method is even more helpful, and the salt solution by the bowel will augment the good effect.

In using the continuous salt solution by the bowel, he still employs a glass infusion bottle, raising it only high enough to produce the necessary flow. The solution is kept warm by hot-water bags. The tube is compressed so as to make the fluid run by drops at least a drop a second. A medium size soft catheter carries it into the bowel. In ordinary cases he stops the flow for one hour out of every four. If the case has been drained by tubes or gauze the salt solution may be used as freely as the bowel

will absorb it. If, however, there is no drainage, he doubts the advisability of the free use of the solution. In drainage cases we note that the drainage from the tubes is at times very free, and almost colorless, showing that much salt solution is absorbed by the blood vessels, and that it is freely thrown off by the serous membrane. In closed operative cases, or in non-operative cases, where the treatment is used, he believes it is safer to use the salt solution only in reduced amounts. Otherwise there is some danger of the fluid accumulating in the peritoneal cavity.

Intestinal Obstruction.—Dr. Ed. A. Balloch thus sums up his paper.

1. The preferable treatment for dynamileus, due to suppurative peritonitis, is the removal of the focus of infection; the best after-treatment being that advocated by Murphy. If the removal of the focus is not expedient, the Ochsner method gives the patient the best chance.

2. True obstruction is characterized by a fairly constant group of symptoms which should enable a diagnosis to be made in the majority of cases.

3. If a diagnosis of probable obstruction is made, cathartics should be withheld. There is no objection to the use of enemas.

4. An early diagnosis is a great factor in saving life in cases of bowel obstruction.

5. In true obstruction the only remedy is surgical intervention.

6. The choice of operation depends entirely upon the condition of the patient.

7. While radical removal of the cause of the obstruction is the ideal operation, it is not to be advocated as a routine measure in all cases.

8. In many cases the making of a fecal fistula is a life-saving procedure.

9. As general anæsthesia adds materially to the danger in operative cases, local anæsthesia should be used wherever possible, and always in making a fecal fistula.

Alabama Medical Journal, February, 1909.

Gonorrheal Arthritis.—Dr. W. T. Berry says that it does seem that the vaccine treatment has been and is of distinct value in the treatment of a gonorrheal joint. The injection of about thirty minims of the anti-gonococcal serum into the loose subcutaneous tissue between the deep fascia and skin in the back of the upper arm first on one side and then on the other at intervals of from two to six days gives good results. Following the local reaction there is usually an increase in the joint symptoms for a few hours, then comes a marked improvement. Cases treated early, before any anatomic changes or much effusion has taken place,

will surprise you by a cure after two or three of the injections at intervals of twenty-four to forty-eight and seventy-two hours. The serum does not have any effect on the specific urethritis, hence have the genito-urinary surgeon carry out faithfully and vigorously the local antiseptic and astringent treatment of the gonorrhea itself. If the local gonorrhea is not cured a re-infection may be expected. Many injections might be required in joints of several weeks standing. The very chronic gonorrheal joints and those due to a mixed infection are not benefited by this serum treatment.

Dacryocystitis.—Dr. S. L. Ledbetter believes that in the simpler forms of dacryocystitis which come as a rule from mild infection from the lids or nose the trouble may be readily relieved by treating the conditions found in the eyes or nose. In the cases found in young babies, where no nasal obstruction exists, the frequent and free use of warm boric acid solution followed by an instillation of argyrol, 30 grs. to 3j, will usually be all that is necessary. The solution should be dropped in the inner cavities and pressure made on the sac. In this way the sac is emptied and the solution drawn in by the resulting vacuum. In case this procedure does not prove sufficiently efficacious the lachrymal syringe may be used for flushing out the sac, and injecting astringent and germicidal solutions. In this way a cure is generally effected, provided the nasal ducts are not occluded. In that case the obstruction must be gotten rid of before satisfactory results can be obtained.

The Southern Practitioner, February, 1909.

The Prophylaxis of Cancer.—Dr. T. A. McGraw says that in summing up this matter, it seems to him that one may reasonably conclude that though ignorant of the fundamental cause of malignant degenerations we have no certain means of prevention, we may, nevertheless, hope to forestall its development, in many cases, by curing pathological conditions, which act as exciting causes. The preponderance of evidence teaches us that surface cancers are largely due to injuries, chronic irritations, inflammations and ulcers, which destroy the resisting power of the tissues and stimulate the development of cancer germs. The neglect of such troubles, therefore, especially in persons of middle and old age, may result in disaster. If we would prevent the malignant degenerations which follow closely upon such conditions, we must see to it that men and women, approaching middle life, are cured of such troubles. Uterine lacerations should be repaired, gall-stones removed, chronic gas-

trich ulcers operated on, and chaps and indurations of the lower lip and ulcers in the mouth excised. In short, wherever a morbid spot shows itself on the skin or mucous surfaces, it should be made the subject of careful consideration and treatment. By so doing we may reasonably expect to prevent the development of cancerous troubles in such localities.

A Review of Gynaecology During the Past Decade.—Dr. Lucy Waite says that time was that the curette was as much in the daily use of the busy surgeon as his own knife and fork, and any one with an attachment of an M. D. was supposed to be qualified to use it. It was hardly considered an operation at all, and the more ignorant a physician was of his case the more cheerfully he ordered out his curette. "Only a curetting" was a common expression in every hospital operating room. But now that countless women have gone to their graves, and many more have been made invalids by this deadly instrument in ignorant hands, those who have done the least damage with it have laid it aside—the gynecologist is done with the sharp curette except for diagnostic purposes. Unfortunately this is another example of the imitators continuing after the originators have learned wisdom, there is no doubt but that a great change has come over the profession in regard to this important subject during the last decade and it is quite certain that another decade will find the curette missing in the surgical armamentarium.

The American Practitioner and News, Feb., 1909.

An Address.—Dr. B. H. Detwiler says that Dr. Sweeny's monograph, *Animal Therapy, its Relation to Immunity in the Treatment of Tuberculosis*, gives a plain statement of the method of preparation, and the results which he has obtained through the use of anti-tuberculosis lymph, and is worthy of careful perusal. The doctor makes no spectacular claims for the remedy. On the contrary, he explores the fact that it has been eulogized too highly by physicians possessed of more enthusiasm than judgment. At the same time his clinical reports show the excellent results that he and other conservative physicians are obtaining through the use of anti-tuberculous lymph, and convinces the reader that he speaks "as one having authority."

In the light of the author's own experience with the remedy, supplemented by reports of many other physicians who have used it, he believes that anti-tuberculous lymph may be ranked with diphtheria antitoxin as an immunizing agent, and that

another milestone has been erected to mark the triumphal march of medical progress.

Maryland Medical Journal, February, 1909.

The Physiological and Therapeutical Influence of the Mind on the Body.—By Dr. W. E. Magruder.

The Southern Clinic, February, 1909.

Symptoms of Tubercular Ureteritis.—By Dr. B. Robinson.

Book Notices.

Transactions of the Fourteenth Annual Meeting of the American Laryngological, Rhinological and Otological Society. Held in Pittsburg, Pa., May 28, 29, and 30, 1908. St. Louis: Published by the Society, 1908.

As usual, this volume is one of great interest. It contains 548 pages, and it is beautifully and substantially bound, properly indexed, etc. It contains a great many beautiful illustrations. Among those that deserve special mention is the paper by Dr. Joseph C. Beck, on "The Surgery of External Nasal Deformities." This article has forty-four beautiful illustrations. Dr. John O. Roe, also, has a paper on "Nasal Deformities," which is of great interest. This paper has twenty-four illustrations of interest. Few volumes of transactions come to this office that are of more value than this.

Transactions of the Tenth Annual Meeting of the American Proctologic Society, held at Chicago, Ill., June 1 and 2, 1908.

These transactions are nicely bound, and are printed on heavy, high grade paper. The volume contains 146 pages, and on the subject with which it deals it seems to be very complete and very valuable.

The Changing Value of English Speech. By Raley Husted Bell. Hinds, Noble and Eldredge, publishers, 31 West Fifth street, New York City.

It is a good thing for a doctor to get away for a little time from medical subjects—a diversion benefits. None of us pay enough attention to the words we use; our thoughts are often slovenly expressed, and a brilliant idea may become obscured by its setting. Dr. Bell seeks to impress this upon us and he does it in a delightful manner, affording both instruction and diversion to his readers. *Diseases of the Digestive Canal.* By Paul Cohnheim. Philadelphia: J. B. Lippincott & Co. \$4 net.

This book is written in a simple and at-

tractive style. It is absolutely modern and abreast of the most recent advances in alimentary diseases. Diagnosis is the keynote, and great stress is laid on how the earliest possible diagnosis can be made. The treatment is full and practical and is the result of the mature experience of the author.

The book contains 375 pages with many instructive illustrations.

Primary Studies for Nurses: A Text-Book for First Year Pupil Nurses. By Charlotte A. Aikens, formerly Superintendent of Columbia Hospital, Pittsburg, and of the Iowa Methodist Hospital, Des Moines. 12mo of 435 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1909. Cloth, \$1.75 net.

The purpose of this book is to help in securing graded instruction in training-schools, to promote uniformity in teaching, to assist in eliminating non-essentials. It is a first year book of practical importance, and should be read by every student nurse, and the teacher will find it of great service too.

We cannot speak of the book too highly and take pleasure in recommending it.

Wells's "Tono-Bungay". The Duffield Company, New York. Price \$1.50.

"Tono-Bungay" is the name of a patent medicine and the story is the record of the financial rise and fall and moral transformation of its makers and promoters. The hero (who tells the story) is the protege of his uncle, a chemist in an out-of-the-way English provincial village. This uncle is always dreaming of and scheming to obtain great wealth. After some vicissitudes these dreams come true, thanks to Tono-Bungay. The medicine itself is a fraud—worse than a fraud, since it is an insidious habit-forming intoxicant and harmful to the kidneys.

In this graphic story Mr. Wells pictures the moral degradation involved in the promotion of such a business; how it wastes men's finer abilities, takes the edge off their consciences, leads to gross extravagance and speculation, engenders enormous economic waste. Incidentally he embraces the splendid opportunity presented to throw a strong sidelight on the socialistic movement of which he is one of the most gifted champions.

Finally, of course, Tono-Bungay leads to ruin—but it is a powerful narration in the telling. Mingled with the central theme there is a clever story of the wasted life of a young man of scientific tastes—a man with dreams of the higher order and aspirations of a nobler type, stifled in the mad chase for gain. There is a love story—even a lison—studies in aeronautics, a voyage to Africa for mysterious "quap"—or ra-

dium. Wealth of imagination and variety enough to suit any one!

Saunders's Pocket Medical Formulary.

With an appendix containing many useful tables, and suggestions for treatment in emergency conditions. By William M. Powell, M. D., member of the Philadelphia pathological society, etc. Ninth edition, thoroughly revised, and enlarged. Philadelphia and London, W. B. Saunders Company, 1909. (Price, \$1.75 net).

The popularity of this formulary cannot be questioned since it is now in its ninth edition. Its usefulness, too, cannot be doubted, especially for the junior practitioner. We are not of those who believe that prescriptions should always be formulated extemporaneously in the presence of the patient. This contains many that have been tried and stood the test, each bearing the signature of the author. It is a convenient book of reference for the office table, or may be carried in the pocket, the binding being strong leather.

Surgery. By John Allan Wyeth, M. D., LL. D., Professor of Surgery in the New York Polyclinic Medical School. Octavo 816 pages, 864 illustrations. Marion Sims Wyeth and Co., Publishers, New York, 1908. \$6.00, prepaid.

Many readers will recall Wyeth's "Text-Book on Surgery" which appeared in 1887, and which subsequently went through three editions. The last appeared in 1900. Later Wyeth acquired the rights from the publishers and has now prepared an entirely new work. Many new illustrations have been added, a number of them in colors. All are well chosen.

The book is particularly rich in minor surgery although the technic of major operations is sufficiently comprehensive for ready consultation. Less important matter is discussed in foot notes of smaller print.

The work is one of the best of the single volume surgeries. Paper, press work and binding are good.

Nervous and Mental Diseases. By Archibald Church, M. D., Professor of Nervous and Mental Diseases and Medical Jurisprudence in Northwestern University Medical School, Chicago; and Frederick Peterson, M. D., Professor of Psychiatry, Columbia University, Sixth edition, revised and enlarged. Octavo volume of 944 pages, with 341 illustrations. Philadelphia and London, W. B. Saunders Company, 1908. Cloth, \$5.00 net; half Morocco, \$6.50 net.

The thorough manner in which this subject is handled will please those interested

in this special line of work. The book is freely illustrated. The pathological conditions of the brain and nerves are especially interesting. The subject of mental diseases is nicely handled and much valuable data is given regarding the different subjects. On the whole it is a work well worth the attention of those interested in this specialty.

Essentials of Medicine. A Text-Book of Medicine for Beginning a Medical Course, for Nurses, and for all Others Interested in the Care of the Sick. By Charles Phillips Emerson, M. D. Illustrated by the author. 383 pages. Philadelphia and London: J. B. Lippincott Co.

In this book the writer discusses elementary internal medicine in a manner suited to third year medical students and to nurses. In most text-books in medicine the beginner finds it difficult to distinguish between what is essential and what is exceptional between the main symptoms upon which a diagnosis is usually based and those that occur only occasionally. The need for a well-written elementary text-book is clear, and this need has been well filled by the author. The book is interestingly written and is clearly based upon a large personal experience, both clinical and pedagogic.

Diseases of the Genito-Urinary organs and Kidney. By Robert Holmes, A. M., M. D.; and Harlow Brooks, M. D. Published by W. B. Saunders & Co. Pp. 356. Illustrations 292.

In their preface, the authors do not profess that the work is a complete one, this being impossible in a book of this size. They have devoted the greatest amount of space and the fullest description to those conditions and methods which have appeared to them to be of the greatest importance or to those which, being of recent development, may be presumed to be less familiar to the practitioner. In pursuance of this policy we find considerable space devoted to endoscopy, cystoscopy and catheterization of the ureters. Examination of the urine is dismissed shortly, while the part describing examination of the urethral exudate and of the semen is fuller. There are complete useful chapters on the treatment of nephritis, on uræmia, tuberculosis, stone and tumor of the kidney. The chapters on prostatic disease are interesting. Gonorrhœa is connected with cancer of the prostate thus: "The gonorrhœa leaves behind a chronic posterior urethritis, from this a chronic prostatitis results by infection through the prostatic ducts, careful study of many sections from 58 cases of

prostatic enlargement has convinced the writers that the hypertrophy is really inflammatory in origin, the consequence of this infection, and they are equally satisfied that cancer was present in from 5 to 10 per cent. of the prostates referred to, and that it followed the inflammatory sclerosis, holding as they do this view, we do not think that they recommend with sufficient emphasis the removal of the enlarged prostate in place of the entry upon catheter life."

In the consideration of stone, there is that tendency to provincialism which is to be found all the world over in medical affairs. The experience of the authors is here admittedly scanty, and they rely for methods of treatment on that of Chismore, who performed lithopaxy 154 times, and their recommendations are as follows: One and a half to three ounces of a four per cent. solution of cocaine are injected into the bladder. This means from half to one drachm of cocaine, and it is to be noted in this connection that Morell says that any quantity of cocaine exceeding half a grain cannot be applied to a mucous membrane without the risk of alarming symptoms arising. If this quantity does not give satisfactory anæsthesia, it is run out and fresh cocaine solution applied. For the crushing a lithotrite with a channeled stem is advised; that is, it combines the uses of lithotrite, and evacuator, a device which must weaken the instrument and render it useless for the crushing of a large hard stone, and indeed that the instrument is one of little power is evident from the fact that it is fitted with three separate devices for crushing the stone, firstly, a handicap; secondly, a ratchet and pinion; and thirdly, if these fail, a hammer.

The perineal route is recommended for prostatectomy in most cases, and here we certainly think that a reference might have been made by Freyer's figures of the suprapubic route. In operating for cancer of the penis, there is no reference to the advisability of removing the whole lymphatic drainage area in the groins; and in the experience of many it is, when operating for the radical cure of hydrocele by inversion of the sac, not sufficient to merely pull the testis through the hole in the sac wall. It will slip back through the aperture, unless the sac wall is sutured back. The book is well and profusely illustrated, and is on the whole a good and useful one.

A Text-Book of Medical Chemistry and Toxicology. By James W. Holland, M. D., Professor of Medical Chemistry and Toxicology, Jefferson Medical College, Philadelphia. Second revised edition.

Octavo of 655 pages, fully illustrated. Philadelphia and London, W. B. Saunders Company. 1908. Cloth. \$3.00 net.

This author understands and appreciates the needs of the junior medical student. He does not take it for granted that the beginner in medicine has an adequate preparation in elementary chemistry. In this book the ground is first laid by the elucidation of chemical philosophy, and then the relationship of physiologic chemistry and toxicology are better understood.

The book has been thoroughly revised and made to accord with present conditions. Additions to be especially noted are those relating the electronic theory, chemical equilibrium, Kjeldahl's method for determining nitrogen, classification of alkaloids and of proteins, chemistry of foods and their changes in the body, synthesis of proteins and the latest improvements in urinary tests.

The book cannot be too highly commended as a text-book, and it should be in the library of every general practitioner,

Constipation and Intestinal Obstruction.

By Samuel Goodwin Gant, M. D., LL.D. Illustrated. W. B. Saunders Co., Philadelphia and London, 1909.

"This book, which is practically an excellent summarizing of diseases of the anus and rectum and their treatment, is especially valuable because of the attention devoted to chronic constipation not so pronounced or persistent as to represent a true obstruction, but which in its ultimate development might lead to impaired health at least, or even to mechanical lesions which require mechanical intervention.

Though not favoring the use of drugs, two chapters are devoted to the indications for their use and their careful selection, the latter containing a formulary of favorite prescriptions from experienced men.

After an excellent resume of anatomy in so far as it has practical bearing, the causes of mechanical obstruction both in its acute and its chronic form are taken up in detail. The subject matter is elucidated by a number of excellent illustrations. To the narrowest part of the large intestine where the rectum and sigmoid join is given the name of O'Beirne's sphincter. The teaching of O'Beirne as to the effect that if the desire to defecate be ignored the feces are returned to the sigmoid flexure through reversed peristalsis. The function of the sphincter, he held, was to delay a fecal passage, thus converting the sigmoid into a receptacle. With this theory Gant is not in accord, though he recognizes the existence of the sphincter which by its contraction may produce constipation obstruction. He believes

that constipation is sometimes caused by hypertrophy of the rectal folds, regarding these as among the rarer causes of his condition. Constipation due to hypertrophy of the levator and muscle he regards as much more frequent than generally assumed.

As the symptoms induced by constipation, aside from disinclination for business and social engagements, bad dreams, frontal headache, sallow complexion, foul breath, gaseous eructations, flatulence, and a number of other evidences of impaired health, Gant mentions such conditions as enteropneumosis, angulation, dilatation, and displacement of the bowel, uterine ovarian vesical and prostatic disturbances cold extremities, seminal emissions, and hemorrhoids.

In regard to the diagnosis of angulation the author holds that the majority of kinks which occur in the colon are located at the sigmoid flexure or at its junction with the rectum, and that when such is the case a diagnosis can be made very quickly because the region can be reached with the sigmoidoscope or by the introduction of bougies of or sounds. Such patients will complain of left-sided local tenderness and pain, and when a tactile examination is made a "sausage-shaped fecal accumulation can be invariably felt in Douglas's pouch or rectovesical fold."

In the treatment of constipation the question is taken up, first, from the educational and prophylactic point of view. It is stated that young women who, while in restaurants or theaters or other public places, fail to go to the toilet when they have an urgent desire to do so because they wish to avoid being seen to enter the water-closet or privy, should be discouraged from further continuance in such an unhygienic practice. One principal of a school is held up as a shining light from the fact that she keeps a book and requires her girls to register when they go to the toilet. Her pupils are divided into classes so that they can have practically the same time each day for attending to the hygiene of the bowel. It is stated that the injection of the enormous quantities of hot water in order to bring about a daily movement will in time cause dilatation, displacement, and paresis of the bowel.

As among the most useful remedial agents are mentioned diet, water-drinking, small cold enemas, baths, diuresis, exercise in the open air, bodily movements, massage, mechanical vibration, electricity, psychotherapy, and under some circumstances surgical operation. As to the psychotherapeutic treatment, this, Gant says, he has had frequent recourse to in appropriate cases with excellent results. The dietary he gives is

an extremely liberal one. For poor patients who cannot obtain the services of a physician or masseur an abdominal cannon-ball or muscle beater is strongly advised, unless the constipation be due to a spastic contracture of the bowels, under which circumstances hot water is desirable. The various baths and methods of giving douches and massage are both described and pictured. The chapter devoted to formulæ contains those which are simplest and of most use. In the treatment of spastic constipation, by which term Gant implies a persistent occlusion due to tonic contraction of the muscular fibers of the gut, he states that the first endeavor should be to relieve the enterospasm and in so doing to permit the escape of flatus, arrest colicky pains, allow the feces to escape, and thereby lessen toxic manifestations. This advice is excellent. He would confer a benefit upon the profession if he would give the means by which such a spastic contracture might be recognized.

The chapter devoted to Constipation of Infants and Children is particularly serviceable.

The latter part of Gant's book is devoted to a description of surgical procedures, most of them well recognized and constituting a part of every-day practice."

Practical Bacteriology, Blood Work, and Animal Parasitology. By E. R. Stitt, Surgeon, U. S. N. Pp. 275. P. Blakiston & Sons. Philadelphia, 1909.

This little volume fills a peculiar need at the present time. With the influx of so-called tropical diseases from our colonies, and with the growing recognition of the fact that many tropical diseases are endemic in the Southern States, comes the necessity for a routine examination of the blood and feces, for the taking of bacteriological cultures and for a knowledge of the animal parasites. This work contains all that the average practitioner needs to know of Bacteriology, Blood and Feces examination, and Zoology; and, what is much more important, these subjects are treated very briefly and clearly.

After a description of Bacteriologic technique, staining methods, etc., there is a description of all the more important pathogenic bacteria, with a resume of their history, cultural characteristics, products, and pathogenesis. At the head of every chapter is a key, very much simpler than Chester's, by which a micro-organism may be run down in the same way we run down a wild flower. The bacteriological examination of air, water and milk is dealt with briefly.

The subject of immunity cannot be satis-

factorily dealt with in a work of this size, nor is its practical application within the reach of the general practitioner as yet.

There is in Part IV. a valuable description of the technic for Bacteriological examination of the various secretions and excretions of the body.

The section blood work is a good epitome of the subject as found in larger works.

The section on Animal Parasitology is the most valuable part of the work and we wish more space had been devoted to this subject. At the beginning of each chapter is a zoological classification, (after Braun), of the parasites considered, which is invaluable. Following this there is a description of the appearance, life history and pathogenesis of the parasites, together with notes on the countries in which they are most commonly found.

The numerous illustrations which accompany the text will be found to be an indispensable aid toward the recognition and differential diagnosis of these parasites.

Bacterial Food Poisoning: A Concise Exposition of the Etiology, Bacteriology, Pathology, Symptomatology, Prophylaxis, and Treatment of so-called Pto-maine Poisoning. By Prof. Dr. A. Diendonnes, Munich. Translated and edited, with additions, by Dr. Charles Frederick Boldman, bacteriologist, Research Laboratory, Department of Health, New York. (Authorized translation). E. B. Treat & Co., New York, 1909. Price, \$1.00.

Prof. Diendonnes manual has become favorably known as one of the best presentations of the subject, though published less than a year ago. In the present translation the editor has incorporated descriptions of a number of additional outbreaks of food poisoning, elaborating upon the prophylaxis applicable to American conditions. The classification throughout is excellent. Thus, meat poisoning is divided into poisoning due to meat from diseased animals, due to petrified meat and to the so-called sausage poison. Separate chapters deal with fish, molluscs, cheese, ice cream and puddings, potatoes, canned goods and metallic poisons. A very complete bibliography is appended to this interesting volume.

Epoch-making Contributions to Medicine, Surgery, and the Allied Sciences. Being reprints of those communications which first conveyed epoch-making observations to the scientific world, together with biographical sketches of the observers. Collected by C. M. B. Camac, M.D., of New York City. Octavo of 435 pages, with portraits. W. B. Saunders Company. 1909. Artistically bound. \$1.00 net.

In the arrangement of this novel volume, no effort has been made, either to include all articles on the subjects which appeared the time of the epoch-making one, or to present the subjects in chronological order. The main object is to make the articles available for present uses. The articles are really biographical sketches of the scientific side of the investigator, with portraits. There is also an autograph letter of Lord Lister.

The subjects covered are: Antisepsis, by Lord Lister; Circulation of the Blood, William Harvey, M.D.; Percussion of the Chest, Leopold Auenbrugger, M.D.; Auscultation and the Stethoscope, R. T. H. Laennec, M.D.; Vaccination Against Smallpox, Edward Jenner, M.D.; Anesthesia, Wm. T. G. Morton, Horace Wells, John C. Warren, and J. F. Simpson; Puerperal Fever, O. W. Holmes, M.D. No doubt many will be glad to possess these epoch-making articles, which before now have been difficult to obtain. The subjects are certainly of the greatest interest to us all. The portraits and illustrations are especially interesting.

Therapeutic of Radiant Light and Heat and Convective Heat. By Wm. B. Snow, M.D., Author of "A Manual of Electro-Static Modes of Application, Therapeutic, Radiography, and Radiotherapy," "Currents of High Potential of High and Other Frequencies," Editor of the Journal of Advanced Therapeutics, and late Instructor in Electro-Therapeutics in the New York Post Graduate Medical School. Scientific Authors' Publishing Co., 349 West 57th St., New York. Price, \$2.00 net.

This manual of upwards of 100 pages, illustrated and containing eight full page plates illustrating the methods of treatment has been prepared to meet the demand for a condensed and practical manual on Radiant Light and Heat Therapy. Chapters have been added showing the contrast between Radiant Light and Heat, and Convective Heat. A chapter is also included showing the comparative actions of Radiant Light and Heat and the Roentgen Ray.

Dr. Snow describes the physiological effects of radiant light and heat, gives the practical methods of their application, and their use in the treatment of simple inflammation. The author also describes radiant energy in the treatment of infection, in dermatology and in conditions associated with faulty metabolism. It is an interesting and a useful book especially to those interested in this line of therapeutic agencies.

A Practical Manual of Phototherapy. The Modern Medicine Publishing Co. announce for early publication a work on

Phototherapy entitled *Light Therapeutics, a Practical Manual: Physics, Physiologic Effects, Technique, Therapeutics, Clinical Applications*, by Dr. J. H. Kellogg, Superintendent of the Battle Creek Sanitarium.

This work is the result of what might very properly be called exhaustive experiments and applications of the therapeutic uses of light in one of the world's greatest sanitariums. Perhaps nowhere else could such superior facilities be found for working out the problems connected with the use of light for curative purposes. Very little that is authoritative has been written on Phototherapy, so that this may be regarded as the first really scientific work covering the entire ground of this therapeutic agency.

It contains probably twice as much matter as any other book published on the uses of light in disease. The past few years have witnessed a rapidly growing interest in phototherapy. The time will soon come, if it is not already here, when all hospitals, sanitariums, and even physicians' offices will not be considered adequately equipped unless they have the most approved solar and electric light appliances for both local and general applications.

The thorough treatment that Dr. Kellogg gives to the subject is indicated by the five sections into which the book is divided. They are as follows: Section I—The Physics of Light; Section II—The Physiologic Effects of Light; Section III—The Therapeutics of Light; Section IV—Technique of Light Applications; Section V—Clinical Phototherapy.

"Light Therapeutics" will contain about 225 pages and 75 illustrations, printed in large clear type, and substantially bound in cloth. Price, probably \$2.00 net.

Abstracts of the Leading articles of the month.

Significance of Ophthalmic-Reaction.—

Damark (Wiener Klin. Woch.) concludes:

1. The positive ophthalmic-reaction is indicative of a recent tuberculous infection; the findings in typhoid patients, however, are to be interpreted more cautiously because of the coexisting general hyper-sensitiveness.

2. The negative reaction enables one to exclude a tuberculous lesion excepting: (a) Tuberculous cases under specific treatment for some time. (b) Cachectic or cavernous cases in which the clinical diagnosis is not difficult.

The ophthalmic-reaction is only then reli-

able when: (1) The eye is not subjected to mechanical irritants. (2) Only such preparations are employed which do not contain non-specific irritating substances. (3) Only two drops of a 1 per cent. tuberculin (Pasteur) solution are instilled. (4) Instillations are alternately made in each eye at short intervals. (5) Isolated congestive manifestations of the plica are not considered of diagnostic value.

Krauss, Lurinberger and Reuss (*Ibid*) say:

1. Extracts of toxic typhoid cultures of paratyphoid bacilli B, of colon bacilli and of diluted tuberculin (1-50, 1-100) instilled into the conjunctiva of healthy individuals produce mild secretory reaction; rarely do inflammatory symptoms supervene.

2. The same extracts in typhoid patients and in patients ill with other diseases cause an inflammatory reaction which generally confines itself to the conjunctiva of the lower lid.

3. The ophthalmotyphoid reaction of Chantemesse has as yet no place in the diagnosis of typhoid fever, the Grubler-Widal serum reaction still being the most exact diagnostic method.

Raynaud's Disease and Exophthalmic Goitre.—Angelo (11 Policlinico) says that the association between these two diseases, in connection with their etiology, is the basis of an interesting case which came under observation in the clinics of Rome, Italy. Associations of this kind are found to occur with especial frequency among neuropathic individuals (tabes dorsalis and paralytic dementia; hysteria and epilepsy; or hysteria and neurasthenia).

The patient was a young woman 22 years of age, of a low order of intelligence, who as a child of six years had suffered from a peculiar affection of the hands, with a change of color of the skin, from red to purple and grayish-blue; a sensation of cold, up to impossibility of moving the extremities: "dead fingers," alternating with local cyanosis; constant pain, with nocturnal exacerbations, first in the middle finger of the right hand, then gradually involving the other fingers of the right and left hand, followed by ulceration with a very sluggish course, and terminating in a disfiguring cicatrization and deformity of the nails. In addition to these slowly and steadily progressing affections, another series of disturbances made their appearance, when the patient was about 12 years old, consisting in headache, persistent palpitation with exacerbations of great severity; a sensation of pain and distress in the cardiac region; anorexia; irritability; nightmare; perversities of taste and smell (the patient would

eat soap, wood, or rubber, and complained of smelling coal oil everywhere); profuse intermittent perspiration; general tremor; in crisis-like seizures, sudden attacks of diarrhoea; vertigo; hallucinations of sight and sound. There was considerable emaciation. The patient presented a swelling of the neck, but no actual goitre. The heart dulness was increased; exophthalmos was more marked on the right than the left side. The symptom of tremor was noted, and eyelids showed Stellwag's and Moebius' signs. There was a slight inequality of the pupils.

Tumor of the Optic Nerve, Glioma of the Iris.—Welckers (*Klin. Monatsblt. f. Augenheilkd.*) mentions the case of a girl three and a half years of age, who came under observation in the Ophthalmological Clinics of the University of Freiburg. The iris of the right eye presented a tumor which was at first interpreted as a tuberculoma or syphiloma; but no reaction occurred after antisyphilitic treatment and the injection of old tuberculin. Enucleation of the eyeball was performed, and the microscopical examination served to demonstrate a glioma, which had originated in the iris, filling the entire anterior chamber, and considerably bulging the cornea and the anterior portions of the sclera. The papilla likewise presented a fungus-shaped proliferation, which projected into the interior of the bulb. This tumor of the papilla is not to be interpreted as a metastasis of the iris-glioma, which in its turn had originated from the pars iridita and ciliaris retinae—but as an independent proliferation in the optic nerve papilla, which had undergone almost complete degeneration. The tumor of the iris was in an active stage of development, while the optic-nerve tumor presented partial calcification and ossification. Primary gliomata of the iris are extremely rare, and the author's observation is practically unique in the literature.

Resorcin Poisoning from External Application.—Nothen (*Med. Klin.*) adds two further cases of poisoning through the external application of resorcin to the one published in 1905 by Kaiser. One case was a healthy man, 19 years of age. He was treated for eczema of the back and extremities with an ointment containing precipitated sulphur, resorcin, aa. 75.0, zinc oleate 500.0. About 220 grams of this ointment was used. The first symptoms of intoxication occurred during the rubbing in of the ointment. After recovery, the urine then excreted had a greenish color, and became black on standing. Two days later the urine still contained blood coloring matter, but gave no phenol reaction. The other and fatal case was a child of 11 days, suf-

fering from pemphigus neonatorum on the head, chest and arms. Resorcin, three per cent., was applied in the evening, and bandaged on. At 2 a. m. the baby was found dead. Postmortem examination showed evidences of poisoning by phenol. These very unpleasant results of the use of resorcin externally do not, the writer considers, justify us in discarding so useful a drug altogether, especially as they are so unusual; he never previously had a similar case. They do, however, show the necessity for greater caution in its use. In patients where, by large epidermal defects, the possibility of absorption is greatly increased, it should be entirely avoided, especially in weakly individuals and in small children. When the drug is used continuously for a considerable time, it is wise to prescribe internally hydrochloric acid, which Unna recommends as the best antidote in phenol poisoning.

Prevention of Air Embolism in Obstetrics.—Opitz (Zent. f. Gyn.) says that air embolism is the result of the aspiration of air into the vessels of the uterus after placental removal. There must be a force which drives the air in, or there must be a suction of the vessels themselves, through negative pressure in the venous system, or both. He believes that the position of the patient is of great importance. In firm horizontal bed the pressure is positive in the vascular system; but in the bed found in the average house, the body of the patient is so placed that the pressure is changed through the pelvis, being in improper relation to the chest. When the pressure in the uterus is increased by a contraction, by coughing, etc., the air may be driven into the veins. When the placenta has been removed the vessels of this portion of the uterus collapse, and pressure only closes them the more firmly. Any force that holds the vessels open will cause embolism. This happens with placenta previa, during uterine contractions. The indications in such cases are for abdominal Cesarean section with the pelvis placed high. The pelvis of the patient should be so placed that the upper part of the body is somewhat elevated in all cases of labor.

The Treatment of Early Syphilis.

At Woolwich, the method of inunction which French uses is on the general lines of Aix-la-Chapelle, modified by service conditions. He substitutes barley-water for sulphurous spring water in order to assist elimination by the kidneys and to guard albuminuria—which is rare in syphilis, except in severe cases which have not come under notice early, or have not received adequate treatment. A hot bath, with

plenty of soap and water, is used every morning before the inunction, which latter lasts half an hour. Forty inunctions of 1 drachm, ung. hydrarg. B. P. compounded with lanoline or other substances, form a course. After twenty to twenty-five inunctions when thoroughly done, the teeth may, in some instances, especially if at all carious, feel tender on eating. Treatment is usually then stopped for a week. In severe cases it is wiser to give fifty to sixty inunctions with judgment. All carious teeth should be attended to prior to the commencement of a course. A mouth wash or acetate of alum is used in each case during the inunction course every two hours by day, and a soft-tooth brush is used twice daily. The groins and armpits are closely shaved, and must be kept so in order to guard against mercurial pustulation, which can usually be obviated by care and attention. He selects the groins, inner sides of thighs, and armpits, owing to the greater frequency of glandular orifices in these situations and so better regulated absorptions, as well as for the fact that the glands in these situations are ordinarily much enlarged and must be reduced before there is any question of suspending vigorous mercurial treatment. The glands are, no doubt, the repositories of syphilis, and when thoroughly reduced are capable of asserting their normal depurative and other functions. As cases of syphilis vary so much in variety and intensity, no hard and fast rules can ever be laid down as to treatment. One man may require mercury; another food, another tonics; but he finds no other treatment in the initial chancre and rash stage, say the first six months from contagion, that is so generally valuable as inunctions, but the method requires experience and detailed personal attention. He thinks that a syphilized person should always receive two courses of forty inunctions within the first six to nine months, and if practicable, four courses in the first eighteen months. After the first two courses mouth treatment will ordinarily suffice to guard against relapse, according to the particular indication of the individual case. In many cases hydrarg. cum creta will fulfill all necessary requirements throughout the case. It can be understood, however, that the excellence of this method can only be tested among in-patients under restrictions, such as exist in military life, and that in civil hospital practice, or private practice, this treatment may be difficult to arrange.

The patient must be built up first and local measures are essential. No doubt change of air is of great value, but general treatment is equally important in all grave cases. Milk, eggs and port wine should

supplement the ordinary diet. The duration of administration of mercury is in some measure dependent upon the type of constitutional disease, on idiosyncrasy, and on the general health of the patient. Its objects to any method of pushing the drug and making the patient fit in with the treatment.

If mercurial stasis occurs, and a blue line appears on the gum, or if the gums be spongy and the tongue swollen, stop the drug at once. Give soft food and stimulants, hot baths, paint the gums with a solution of gr. X to the ounce argent. nitratis, and give a weak permanganate of potass. gargle every hour. It is his practice to give mercury more vigorously in the first than in the second year. If the patient is robust, and the attack severe, as evidenced by an infiltrated papular or pustular rash, with or without iritis or alopecia, and marked glandular enlargement, a larger quantity of mercury in the early stages is well tolerated by a careful dieted patient in hospital. If, on the other hand, the infection is a mild one, as evidenced by a non-infiltrated roseolar rash and slight adenitis, or if the patient is nervous or debilitated from any cause, or has carious teeth, a much smaller may be badly borne. As a rule mercury should be efficiently, invariably, but intermittently given for twelve months, although the first nine are much the more important, with gradually increasing longer intervals in the second year, and combined with mixed treatment with potass. iodide or tonics during the intermissions, according to the general condition.—Major, *British Journal of Dermatology*.

A New Method of Mixed Narcosis.

In order to diminish the dangers of chloroform anesthesia by reducing the amount of anesthetic necessary to a minimum, M. Bruneri gave various analgesic drugs several hours before the operation. The best results were obtained with a combination of veronal and dionin. The author reports the latter preferable to morphine, heroin, or other narcotics, as it is less toxic. By giving the two drugs together more powerful effects are obtained than with hedonal, dionin, or veronal alone. Neither dionin nor veronal have any influence upon the heart, lungs, liver, kidneys, or gastro-intestinal tract, and there will be no headache, nausea, vomiting, or lowering of the blood-pressure. The drugs can even be given to children in suitable doses. Dionin has a specific action upon the nerve-endings of the upper respiratory tract, and thus will diminish irritation.

The combination of dionin and veronal is

especially indicated in nervous patients, who fear the effects of the chloroform. A stage of excitement has been observed only with alcoholics. In over 250 cases there were no bad after-effects.

The doses were as follows, given two hours before the operation: Veronal, 8 to 12 grn., dionin, 1-6 to 1-2 grn., for men; veronal, 6 to 8 grn., with the same amount of dionin, for women; and veronal, 4 to 6 grn., and dionin, 1-6 grn., for children. As a rule, 75 min. of chloroform will suffice to induce narcosis. After the operation the patients will suffer from none of the usual disagreeable symptoms. The pains are slight; there is no paresis of the bladder or vomiting. From 5 drams to 1 oz. of chloroform were usually necessary to keep up the narcosis for one hour. Chloroform by this method may be resorted to where chloroform alone would be dangerous.—*Gazz. med. Ital.*

Glyco-Thymoline in Gynecological Conditions, with Particular Reference to Uterovaginal Catarrh.—A novel way of using Glyco-Thymoline for vaginal leucorrhea will be of interest. Obtain a few sea sponges of fine soft quality. Cleanse and boil. Draw a thread or cord through one end of same, saturate it with Glyco-Thymoline (full strength) previously placed in a small dish or cup, say half an ounce. The application of the tampon is best made by the use of a Ferguson's speculum so placed as to expose or encircle the cervix uteri. With sponge filled with Glyco-Thymoline gently press through the speculum against the cervix and gradually withdraw speculum, patient being in lithotomy position with hips raised. If you wish, instruct the patient as to the method. Have her to procure the sponges, also a glass piston formed vaginal syringe, half ounce or ounce capacity. Fill the syringe with the Glyco-Thymoline solution, insert into vagina, slowly pressing piston until syringe is emptied. Then insert a sponge tampon, previously saturated with Glyco-Thymoline (excess solution squeezed out). This is far superior to the cotton or wool tampon and can be outdrawn after twenty-four hours, washed and boiled and used again if desired.

The treatment of mucous surfaces is interesting because effectual. Intra-uterine treatment, however, is a very delicate piece of work and should never be undertaken except by an experienced physician and under favorable conditions. A few of these conditions must be induced by the operator.

First.—Dilation of the os. Often the case is a multipara with a profuse uterine leucorrhea and careful use should be made of the dilator,

Second.—Perfect asepsis—instruments sterilized and parts cleansed.—F. L. Newton, M. D., Boston, Mass.

The Ultimate Results of Tracheotomy.

—Wolf's (Dtsch. Med. Wchschr.) investigations concerning the fate of tracheotomized children were carried out upon a material of 173 cases that came under treatment in the Leipsic Surgical Clinics. Among these 173 patients 85.8 per cent. had remained free from all disturbances. In 10.1 per cent. of the cases there were mild disturbances, such as hoarseness or tendency to catarrh. No more than 4.1 per cent. presented grave disturbances, including tuberculosis in four instances. Three of these children, however, came from tuberculous families, so that there remained but one case without a demonstrable source of infection. Hence serious disturbances after tracheotomy are by no means common; certainly less frequent than after intubation. Especially unjustifiable is the assertion that is sometimes made to the effect that a tracheotomy creates a disposition for pulmonary tuberculosis.

Treatment of True Pneumonia with Roemer-Pneumococcus Serum.

—Monti (Achr. f. Kindekeil.) states that Roemer obtains his pneumonia serum from asses and calves. The writer has made use of it in twelve cases, of which he gives the histories. In all of them temperatures fell and resolution took place from the second to the fourth day after treatment was begun. The general condition improved, and dyspnea diminished. If the first dose was too small the fever was not affected until the second dose had been given. The local process is influenced. Repeated doses have a better effect than one large dose. No bad effects were noticed in any case. Only serum treatment was given in the author's cases, all other remedies being withheld.

Treatment of Basedow's Disease with

Antithyroidin — Bauman (Berl. klin. Woch.) very strongly opposes the view, recently voiced, that many of the good results obtained with antithyroidin are a result of suggestion on part of both patient and physician. One of the author's cases of Basedow's disease was complicated by metabolic disturbances and the appearance of traces of albumin in the urine. Antithyroidin was given for only three weeks; at first 8 drops three times a day, then 10 drops. All in all, 30 Cc. were employed. The result was quite surprising. After four or five days there was pronounced improvement and at the end of the treatment the patient felt restored to perfect health. The thyroid tumor had decreased 1 cm., the pulse was only 70 per minute, and the other objective signs

had disappeared. There was no possibility of treatment by suggestion, since the patient at first refused to take the medicine. The heart action was not only reduced in frequency, but all irregularity disappeared. No after-effects were seen. The drops should not be given in alcohol, but in plain or mineral water.

The Behavior of the Kidneys in Pernicious Anemia.

—Paszkievicz (Virchow's Arch. f. path. Anat.) says that examination of the kidneys in twelve cases of pernicious anaemia of unknown etiology showed that in every instance fat was present in the kidneys, but in slight amount and in especial arrangement in the cells, being rather of the nature of a fatty infiltration than a degeneration of the renal epithelia. In long-continued or very rapidly progressing cases focal deposits of furruginous pigment were present, but only in the cortical substance in the epithelia of the convoluted tubules. In all cases there was a marked increase and thickening of the interstitial tissue, most pronounced in the medullary substance, which the author is inclined to designate a sclerosis.

Action of the Mucosa of the Bladder on Micro-organisms.

—V. De Bonis and A. Paue have experimented on animals to ascertain whether the mucosa of the bladder has any bactericidal effect on bacteria introduced into the bladder. They conclude that there is no bactericidal effect produced by the mucosa of the bladder. All the bacteria that were used in their experiments increased in number progressively, and their colonies grew larger. The colonies examined microscopically were entirely typical in form. While the urine flows freely through the bladder it presents a medium in which the germs grow normally. There is very little absorption of the bladder contents, and the increase in growth of colonies is not due to the concentration of the urine, but to a true multiplication of the organisms.—Giornale Internazionale delle Scienze Mediche.

Operative Interventions Upon the Stomach and the Modifications of the Intestinal Chemismus.

—Betagli has made experiments on gastroenterostomized animals as to the conditions of the intestinal chemismus. He produced a stenosis, or an occlusion, of the pylorus. He then examined the function of the pancreas and the secretory action of the duodenal mucosa. When the pylorus is left previous all the functions go on normally. But when the passage of the acid chyme into the duodenum is prevented there are modifications of the normal condition. These cause dyspeptic symptoms and probably assist in

causing a return of the original disease process or an alteration of the anatomo-pathological condition of the organ.—*La Riforma Medica*.

Visual Auras of Epilepsy.—A Rodiet and F. Gans describe the different kinds of aura preceding epileptic attacks which may be referred to the eyes. They include troubles of accommodation, photopsia, amolypia, and ocular tension followed by complete blindness for a short time. There are motor auras, including convulsive movements of the eyes, nystagmus, and winking. There are sensory auras, consisting of painful feelings in the eyes. Another type of aura consists of the seeing of colors, the inability to distinguish colors, macropsia, micropsia, seeing of lights and stars. There no difficulty of accommodation. Personages are reproduced by the eye that are causes of fear to the patient, dressed in peculiar ways and colors. The faces grimace at the patient. Others see the themselves surrounded with flames from which they must escape, or globes of fire pass before them and objects scintillate. Again, the patient sees blood. The authors cite six interesting cases, and end with the statement that these visions, colored or not, are generally frightful, and the expression and gestures of the patient indicate fright. Motions of defense may result in injury to other persons, and account for impulsive acts of which the patient is unconscious, but which make the epileptic dangerous to his surroundings. Such attacks are often followed by delirium.—*Archives de Neurologie*.

Abdominal Auscultation as an Aid in Diagnosis.—Hertz (*British Medical Journal*) claims that we have in auscultation a means by which the rate of passage of the small intestine from the stomach to the cecum can be measured and describes his experience in listening over the cecum while at the same time an x-ray (the patient having taken bismuth) was made of the abdomen. It was found that the appearance of a shadow in the cecum immediately followed the occurrence of the earliest sounds in the right iliac fossa. In those investigations in which auscultation was practised without skiagraphy, the first cecal sounds were always heard at about the time that x-ray observations had previously shown that the first traces of the food would reach the cecum. Auscultation may therefore take the place of skiagraphy, when the latter cannot for any reason be used, in the diagnosis of the rare cases in which constipation is due in part to the slow passage of food through the small intestine. The sounds heard over the cecum are in all probability due to the actual entry of the fluid

contents of the ileum into the gas-containing cecum. Their loudness varies considerably in different individuals. When, five or six hours after a meal, the gas is largely replaced by fecal material, the sounds diminish in intensity and become less continuous. At all times they are louder in the upright than in the horizontal position, but for the first few seconds after lying down the sounds are generally loud and almost continuous, owing probably to the movements of the fluid contents produced by the action of gravity.

Fifth District Medical Meeting.

The fifth district medical society of North Carolina, met with the Robeson County Medical Society in Lumberton April 8th. Dr. W. T. Tate, of Gibson, presided. Dr. Alexises McGlannan, of the City Hospital, of Baltimore, was present and read a very interesting paper. Other papers of interest were read by different members of the society. The twenty-five visiting physicians in attendance were entertained at dinner at the Waverly Hotel by the local physicians. The society adjourned to meet at Jackson Springs on July 7, 1909.

Unmodified Sun Rays in the Treatment of Lupus Vulgaris.

Dr. J. Goodwin Thompson extols the advantages of the employment of the systematic sun exposures in the treatment of lupus vulgaris where unclouded sunshine and other favorable climatic conditions are constant and dependable qualities. Eleven cases are reported by other writers and out of these eight were cured and the remaining three were stationary. Of the thirty-four cases of scrofuloderma, six cases were greatly benefited while the remaining twenty-eight were cured. The author reports the case of an old lady, who had lupus of the face for twenty-five years. She was recommended by the author to lay out in the sun five hours a day for a period of four months, her head swathed in a cloth, and eyes shaded with a dark bandage. In about four months her face was found smooth, and the apple-jelly nodules which he had seen on her cheeks four months previous to this treatment had completely disappeared. After further treatment she was entirely cured.

The curative factors in the treatment of these cases were the bacterial action of the sun's rays, the tonic action of the air, the mildness and regularity of the temperatures at Cannes, which allows an open-air life, and the prolonged sunbaths.—*British Medical Journal*.

Miscellaneous.

Virginia Examination Questions, Used December, 1908.

SECTION ON PRACTICE, ETIOLOGY, AND DIAGNOSIS.

Drs. E. T. Brady, Abingdon; H. U. Stephenson, Toano, and R. B. James, Danville, Examiners.

1. What is Chlorosis? Outline treatment, giving prescriptions and hygienic instructions.

2. What is Myalgia? Name most common forms, and briefly outline treatment.

3. What are the primary and secondary manifestations of Syphilis? How treated, and when should treatment begin?

4. Define the terms Splanchnoptosis, Gastropptosis, and Nephropptosis. How are such cases most benefited?

5. What may cause Cholecystitis? Give symptoms.

6. What is the cause of Tuberculosis? How communicated? Give prophylactic suggestions.

7. How can chronic Morphinism be recognized? How managed?

8. What are the Exanthemata? Name them.

9. Differentiate between the causation and onset of Lobar, and so-called Lobar Pneumonias.

10. What may result from a dislodged thrombus?

11. What would probably cause (a) Hematuria, (b) Oxaluria?

12. Give symptoms of Acute Anterior Polio-myelitis.

SECTION ON LARYNGOLOGY, RHINOLOGY, OPHTHALMOLOGY, AND OTOTOLOGY.

Drs. A. S. Priddy, Marion, Chairman; E. C. Williams, and Herbert Old, Norfolk, Examiners.

Laryngology.

1. Define Laryngismus Stridulus, and gives its symptoms, prognosis, and treatment.

2. Give the symptoms, complications, and treatment of Acute Pharyngitis.

3. What two hypertrophic conditions of the naso-pharyngeal region are most frequently found in childhood, and which generally exist as complications in the same subject, and what are some of the results of neglect in their treatment; what is the proper treatment for each condition?

Rhinology.

1. Give two or more causes for (a) Watery, (b) Fetid, (c) Bloody Nasal Discharges, and treatment for severe cases of the latter.

3. Give at least three causes for Pefora-

tion of Nasal Cartilaginous septum, its symptoms and treatment.

Ophthalmology.

1. Give the most common varieties of Eye Strain, their causes, symptoms, and treatment.

2. Define Keratitis, and give its varieties, causes, and treatment.

3. Give a comprehensive definition of Glaucoma, and differentiate it from Cataract, Iritis, and Neuralgia.

Otology.

1. Give four causes of Otalgia, and the treatment of each.

2. Name three or more of the most common causes of Deafness, and explain how each produces such an effect, and give proper treatment.

SECTION ON ANATOMY AND EMBRYOLOGY.

Dr. H. U. Stephenson, Examiner.

1. Name the bones of the skull.

2. Describe the foramen magnum; what structures are found within it?

3. What muscles are attached to the great trochanter of the femur?

3. Wherein does the female perineum differ from the male perineum?

5. Name the extensor muscles of the foot.

6. What portions of the rectum and bladder are covered with peritoneum?

7. Describe the musculospiral nerve.

8. Give the origin, insertion, blood and nerve supply of the following muscles: Sterno-mastoid, internal oblique.

9. Describe the ligaments of the elbow joint.

10. Where is the Gasserian Ganglion situated? Name its large branches.

11. How is the true chorion formed?

12. What is the umbilical cord composed of?

SECTION ON THERAPEUTICS.

Dr. W. B. Robinson, Examiner, Tappahamock, Va.

1. Give the therapeutic uses, the dose, and the common name of Potassium Vitarate.

2. What are the possible dangers from the use of Salol in large doses?

3. In what pathologic conditions is Opium useful?

4. Describe the therapeutic uses of Aloes, and state how it differs in effect from Jalap.

5. Give the indications for the therapeutic uses of Nux Vomica or Strychnia.

6. Give the preparations of Phosphorus and describe their therapeutic uses. State the symptoms of Phosphorus Poisoning and give antidotes.

SECTION ON MATERIA MEDICA.

Dr. William W. Wilkinson, Examiner. Lacrosse, Va.

1. Name official preparations of Arsenius Acid. State their strength and dose.
2. Acetanilid; (a) State dose; (b) physiological action; (c) symptoms of poisoning.
3. Cocain: State dose, physiological action. Give physiological action of Camphor.
5. State physiological action of Aconite.
- 6 (a) Write composition of Dover's Powder. (b) What is Basham's Mixture? (c) Saltpeter?

SECTION ON SURGERY.

Examiners: Dr. Samuel Lile, Chairman;
Dr. E. T. Brady, Dr. R. M. Slaughter.

1. What is meant by Infection? What by Auto-Infection? And how would you treat such conditions?
2. What is meant by Phlegmonous Inflammation or Cellulitis?
3. What are Hemorrhoids, what causes them, and how treated (give palliative treatment and treatment for radical cure)?
4. Give the most frequent dislocation of the elbow joint, giving the positions of the bones involved, how reduced, and treatment until fully cured.
5. What would be the indications for not amputating an arm, forearm, or hand when the tissues are badly lacerated?
6. What causes Dry, Moist, Senile, and Diabetic Gangrene?

7. Differentiate a Tubercular from a Syphilitic Infection of the Inguinal glands.
8. Give Definition of a Compound Fracture, and give treatment necessary to all such fractures.

Foot Note.—Short answers requested.

SECTION ON PATHOLOGY, BACTERIOLOGY,
AND NEUROLOGY.

R. M. Slaughter, M. D., Examiner.

Pathology.

1. Name the form of degeneration that occurs in the so-called wasting diseases, and state the organs and the parts thereof most frequently affected.
2. Define the terms (a) hypertrophy and (b) atrophy, giving examples of each of these conditions.
3. What is a sequestrum, and how formed? What are, and what the functions of (a) osteoblasts, and (c) osteoclasts?
4. Give the pathological nature of (a) the itch (scabies), (b) lupus vulgaris, (c) chancre, and (d) erysipelas.
5. Name a tumor of the connective tissue type, two of the epithelial type, one benign, the other malignant, and state to what class of tumors cysts belong.
6. How many and what are the varieties of cirrhosis (sclerosis) of the liver? What is the pathological cause of the condition?

Bacteriology.

1. Describe the preparation and staining

of a specimen of blood in the diagnosis of malaria.

2. What peculiarity as regards its staining properties has the tubercle bacillus? Name some other bacilli that have the same peculiarity. Give the bacteriology of bubonic plague.
3. Describe the micro-organism which causes enteric fever.

Neurology.

1. What is tic douloureux? Give the treatment of this condition.
2. Give the etiology of acute chorea.
3. Give the treatment of delirium tremens.

CHEMISTRY, TOXICOLOGY, AND MEDICAL
JURISPRUDENCE.

Dr. R. B. James, Examiner.

Chemistry.

1. What is meant by Spectrum and Spectrum analysis?
2. What is common table salt? How found in nature? What impurities make it hygroscopic? What is Glauber's salts? How prepared?
3. What differences exist between Sodium Carbonate and Sodium Bicarbonate as regard their physical and chemical properties and common uses?
4. How is silver obtained from its native ores? How is Silver Nitrate prepared? Give its formula, properties, uses, and common name.
5. What are Alkaloids? Give general method of preparing them. What are some of their common properties?

6; What are the two ways of naming the Alkaloid Salts, according as they unite with an Oxy-acid or a Halogen Acid? Why would you not add an alkali to solution, to be taken internally, containing an Alkaloid?

Toxicology.

1. What is the poisonous principle in Mushrooms? Give symptoms and treatment of Mushroom poisoning.
2. What is the best antidote to acute Cocain poisoning?

Medical Jurisprudence.

1. Describe the differences between burns made before and after death.
2. Give the reliable proofs that a child found dead was born alive.
3. Explain fully what is meant by legitimacy.

SECTION ON PHYSIOLOGY, HYGIENE, AND
HISTOLOGY.

Robert C. Randolph, M.D., Examiner,
Boyce, Va.

Physiology.

1. In what manner, physiologically, does a largely distended stomach produce death?
2. Name the centers and the nerves which

regulate intestinal peristalsis, and describe their action.

3. Describe the muscular and nervous mechanism of defecation.

4. What is Glycogen? From what is it derived? What is it converted into by dilute acids?

5. What is the physiological function of the Liver?

6. How is the sensation of sound conveyed to the brain?

Hygiene.

1. Define humidity of the atmosphere. Why should a humid atmosphere cause rheumatic or gouty persons increased sensitiveness?

2. What hygienic means should be employed by persons prone to catch cold?

3. How long does a diphtheria patient remain infective? How may it be proved that the infective period has ceased?

Histology.

1. What are the germ layers? Name the five groups of tissues.

2. What structures and organs are comprised in the lymphatic system? Describe diffuse Adenoid tissue and where found.

SECTION ON OBSTETRICS, GYNECOLOGY, PEDIATRICS.

Dr. Herbert Old, Examiner.

1. Give the functions of (a) Placenta, (b) Liquor Amnii.

2. Ante-partum examinations: (a) State their importance, (b) of what should they consist?

3. Give the causes of ante-partum hemorrhages.

4. Breech presentation: (a) Diagnosis, (b) Management of first and second stages of the labor.

5. Give reasons for the use and non-use of vaginal douches: (a) before labor, (b) after labor and during the puerperium.

6. Give the early diagnosis of Uterine Cancer.

7. Causes of secondary or acquired Amenorrhea.

8. Gonorrheal infection in the female: (a) Organs usually affected, (b) mention complications.

9. Acute Broncho-Pneumonia in children; (a) Diagnosis, (b) Treatment.

10. Mention the principal differences between mother's milk and cow's milk.

Leukocytosis of Pertussis.—Crombie (Edin. Med. Jour.) says that the blood analysis of one hundred and twelve cases of whooping-cough in various stages shows that the leukocytosis of this disease is almost diagnostic, as it does not occur in other affections resembling whooping-cough. In

seventy-three cases of uncomplicated whooping-cough during the first three weeks of the disease, a leukocytosis of less than 10,000 was met with in only seven cases. In children under a year old the normal leukocytosis is over 10,000; but the leukocytosis in whooping-cough is so high, more especially in very young children, that it is unnecessary to make allowance for the age of the child. This leukocytosis was found to be much the same, on an average, in the catarrhal stage and during the first three weeks of the paroxysmal cough. In individual cases it was found to be highest in the catarrhal stage or during the first ten days of the disease, gradually diminished as the severity of the disease lessened and disappeared along with, or soon after, the convulsive attacks of coughing. It may persist, however, for months, and in one case was found when the whoop had lasted for three and a half months. This leukocytosis varies directly with the severity of the attack, and in the catarrhal stage is a useful guide to prognosis. A high leukocytosis points to a severe and long-lasting attack. At later stages of the disease it varies directly with the number and severity of the paroxysms. In mild cases it may be found to be normal or but little above normal. *The lymphocytes are always increased either absolutely or relatively.* In children under one year old the number of lymphocytes normally exceeds that of the polymorphonuclear leukocytes but in whooping-cough the divergence is so great that it is but seldom necessary to consider the age of the child. During the acute stages of the disease the percentage of polymorphonuclears and lymphocytes may be said to be inverted. The lymphocyte count thus gives a simple and reliable means of diagnosing whooping-cough during the early and most infectious stage before the development of the typical symptoms, and when isolation is most effective.

Photometric Examination of Schools.—

Quissfeld (Prog. Med. Woch.) concludes these to be requisites of proper school buildings;

1. They should stand north, northeast or northwest.

2. They should lie as high and open as possible.

3. They should have large windows, reaching to the ceiling, with a glass surface of 1.5.

4. They should have a depth of room not more than double the height of the window, so that the light may fall direct on each place.

5. Very small window-bars.

6. Smallest amount of wood in the win-

dow frames.

7. The most practical position of the teaching-room on that floor.

8. The curtains should be light gray and very translucent, so that only the direct sunlight is shut off.

9. The walls should be white or gray, and no objects should be on them.

10. No plants should be in the windows.

11. A succession of objects for instruction in the classroom, with direct and permanent sunlight, under special care for the children's work, in order to avoid even the best curtains.

Malarial Cirrhosis of the Liver.—B. Duprey (The London Lancet) says that while cases of cirrhosis of the liver must come frequently under the notice of practitioners in the tropics, but few attribute the cause to malaria. Until quite recently the writer, like many others, thought that the condition of these miserable, emaciated, pot-bellied little patients with very often albumin in their urine, was the result of a toxæmia brought about by the absorption of poisons from the intestinal canal, most probably generated by parasitic worms.

Having treated now about 12 or more of these little patients the author has no doubt about the malarial origin of their complaint. The disease is a slow fibrosis starting in the liver and spleen and finally ending in intestinal nephritis. It is the result of repeated attacks of malaria, especially when neglected, upon young, unresisting, and possibly badly fed subjects.

The large mononuclear leucocytes are usually much in evidence in chronic malarial poisoning and sometimes at the edges of a film they are seen to contain pigments. Even without this latter surety the increase of these leucocytes is a sure sign in malarial countries.

It is evident that, taken in time and with proper treatment, the cirrhosis of the liver and even a fairly large accumulation of ascitic fluid, as was present in Case 5, can be cured to a certainty. If the kidneys are affected, as shown by swelling of the ankles and albuminous urine, the author should think that the disease has gone too far and that recovery is impossible. The danger of allowing too much fluid to accumulate is shown by the two deaths mentioned above.

Since this condition of cirrhosis of the liver and ascites is due to malarial poisoning the treatment must be evident. Quinin in suitable doses regularly administered is the sheet anchor. In combination with quinin the author has used sulphate of sodium and tincture of iron. There is certainly no better, as he has found.

Immediate improvement is obvious, even after 24 hours' administration. The liver is found to decrease in size; the urine flows more freely and the ascites is being gradually absorbed. The treatment must be persevered with and fluid removed on re-accumulation.

Diabetic Gangrene.

A case of Diabetic Gangrene affecting the breast is reported in the Australasian Medical Gazette, by Dr. Swift. The onset of the condition was very sudden, with agonizing pain, and in the middle of the night. The pain was referred to the left nipple and was described as similar to that of a red-hot iron being bored into the skin. One and a half inches below and to the outer side of the nipple was a livid bluish spot, which in a few hours was gangrenous and covered with blebs. The temperature was 102.6° F. and the pulse rate 120. There was a very large quantity of sugar in the urine, and diacetic acid also; but no albumin was present. For some days the patient's condition was serious; vomiting was very troublesome, pain intense and subdued only by morphia, and fever up to 104°. Subsequently a new focus of gangrene appeared near the sternum, and the slough demarcated around the original patch measured six inches by four. Ultimately the two foci ran into one, which healed up satisfactorily, and simultaneously the sugar disappeared from the urine, which became normal also in quantity and in specific gravity. It is known that a severe fever, as, for example, enteric, affecting a diabetic patient will sometimes be accompanied by disappearance of sugar from the urine, and Dr. Swift suggests that the similar result in his case may be ascribed to the products of the growth of the micro-organisms in the sloughing masses of breast-tissue. He has searched the literature for a similar case, but is unable to find any record of one; certainly diabetic gangrene affecting an organ so near the heart and so well provided with blood-vessels must be extremely rare.

Treatment of Appendicitis in Pregnancy

Dr. Rudaux considers that as a prophylactic measure all pregnant women would be cautioned against the dangers of constipation and advised as to the use of laxatives. The diet should be arranged on a simple and nourishing basis, and these precautions must be especially emphasized in the case of persons who have already suffered from appendicular attacks. Should an attack supervene, the patient must be kept in bed and deprived of all food and drinks, and neither purgatives nor injec-

tions should be administered. Subcutaneous injections of serum are given to relieve thirst, and an ice-bag is suspended over the right iliac fossa. If the abdominal pain is severe, injections of morphine and heroin are useful. When the symptoms have subsided after five or six days, a teaspoonful of Evian water, may be given every half hour or hour, but not more than half a pint should be given during the day; on subsequent days a pint may be allowed. When the temperature is normal, spoonfuls of milk, with either rice-water or Evian water, are given. After four or five days a large sound should be inserted into the rectum twice a day for half an hour, and at the end of a week small doses of olive or castor oil may be given to promote the action of the bowels. The ice-bag should only be removed when all tenderness has disappeared. Food is then given with great caution, and the patient is kept in bed for at least a month. Surgical intervention is only advised when symptoms of abscess or of general peritonitis are observed.—British Medical Journal.

New Diagnostic Methods in Appendicitis

Rovsing of Copenhagen has employed for the past three years an original and, as it appears, a very valuable method of examination in cases suspected of appendicitis or typhlitis. With his right hand he presses his left one, palm downwards, against the integument of the left iliac fossa and lets it glide upwards along the descending colon until it reaches the vicinity of the left colic flexure. By this procedure the gases contained in the large intestine are made to exert a greater pressure against the intestinal walls than before, with the result of eliciting severe darting pains in the region of McBurney's point. In each of his two first cases in which he tried his new method of examination there was strong suspicion of the affection being a perityphlitis judging by the usual signs. The one patient, however, did not experience the least pain in spite of rather vigorous massage of the descending colon, while the other patient felt at once severe pain, referred to McBurney's point, after a mere compression of the descending colon. The subsequent operations explained the difference. The last mentioned patient turned out to be suffering from appendicular peritonitis, whereas the first patient on being explored by laparotomy did not present any alteration of the vermiform appendix or intestine, but a retroperitoneal swelling, which lifted up the ascending colon and which a lumbar incision proved to be due to a perirenal phlegmon.

Judging from his experience in more than too patients, Rovsing considers his method a trustworthy, sensitive, and valuable diagnostic help. Its importance lies in a two-fold direction. First, it will aid in the correct diagnosis in the many doubtful cases in which the nature of a painful swelling in the right iliac fossa cannot with any certainty be made out, such as those in which the diagnosis of a renal affection, a ureteric or hepatic lithiasis, or a salpingitis appears just as probable as that of an appendicitis. For only in those cases where the pain is caused by an affection of the appendix or cecum will it be elicited by pressure against the healthy descending colon. The trustworthiness of the symptom is well borne out by the following observation. In several cases of gangrenous appendicitis where the pain was referred only to the epigastric area and had therefore led to the suspicion of a gastric affection (perforating ulcer of the stomach), Professor Rovsing's method gave at once the correct diagnosis, pressure against the healthy descending colon immediately eliciting the typical pain over McBurney's point. The second field for application of the method is to be found in the acute cases where direct palpation is dangerous, painful, or impossible on account of defensive muscular rigidity and therefore must be omitted, whilst palpation of the healthy descending colon does not present any difficulty.—The London Medical Lancet.

The South Carolina Medical Association.

The sixty-first annual meeting of the South Carolina Medical Association will be held at Summerville, April 21st and 22nd. The house of delegates will convene April 20th.

The preliminary programme of this meeting indicates that there will be a large attendance and an interesting meeting. This year, for the first time, there will be two sections—a medical and a surgical. This is a plan that is needed in North Carolina, and one that should be adopted.

The officers of the association are: S. C. Baker, Sumter, president; R. H. Black, Spartanburg, first vice-president; W. H. Nardin, Anderson, second vice-president; A. T. Baird, Darlington, third vice-president; Walter Cheyne, Sumter, secretary; C. P. Annar, Charleston, Treasurer.

In connection with the meeting there will be a reception at the Pine Forest Inn, April 21st, at 9 p. m. There will also be a reception at the Pinehurst Tea Gardens, near Summerville. This reception will be tendered the association by the hospitable founder, Dr. Chas. U. Shepard on April 22nd, at 5 p. m. There will be also be a

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Notes

Smoker at the Pine Forest Inn April 22nd, at 9 p. m.

The general meeting will be called to order April 21st, at 10:20 a. m. The address of welcome will be delivered by Legare Walker, Esq. Dr. F. Julian Carroll will respond to the address of welcome.

In the surgical section the following papers will be read: "Empiricism in Surgical Practice," Chas. M. Rees, Charleston. "Post-Pharyngeal Abscesses," E. W. Carpenter, Greenville. "Tuberculosis of the Head of the Colon Mistaken for Appendicitis: Operation, Death," H. R. Black, Spartanburg. "Anesthetics: Chloroform vs. Ether," Walter Cheyne, Sumter. "Similar Symptomatology in Chronic Appendicitis and Chronic Gall Bladder Lesion. Report of Cases," A. E. Baker, Charleston. "A Method of Removing Anterior Displacement of the Triangular Cartilage of the Nose Cases," Peyre Porcher, Charleston. "An Unusual Case of Appendicitis," Theodore Maddox, Union. "Deformities of the Nasal Septum: Their Causes and Effects and the Modern Operation for Their Correction," E. R. Wilson, Sumter. "Report of Unusual Case of Foreign Body in the Eye; Removal after 36 years," E. R. Wilson, Sumter. "The Relations of Undescended Testicle to Strangulated Hernia.

Proper Operation," G. R. Dean, Spartanburg. "Surgical Treatment of Goitre," LeGrand Guerry, Columbia.

The following papers will be read under the medical section: "Pathological Significance of Diseased Tonsils," John F. Townsend, Charleston. "Septic Endocarditis in a Child: Two Cases of Hematemesis in Infants Occurring in Same Family," J. J. Watson, Columbia. "Preventive Tendencies and Measures," Fillmore Moore, Aiken. "Sanitation in Small Towns," William Egleston, Hartsville. "Hyperchlorhydria; Report of Cases," F. M. Durlham, Columbia. "Pellagra," G. A. Neuffer, Abbeville. "Atypical Lobar Pneumonia," Robert Wilson, Jr., Charleston. "Musca Domestica," the common house fly, F. A. Coward, Columbia. "Things the Doctor Should Know About Milk," F. A. Coward, Columbia. "Cancer of the Uterus; A Plea for Early Diagnosis," H. R. Black, Spartanburg. "Mucous Colitis," A. G. Eaddy, Timmons ville. "The Surgeon vs. the Physician," J. F. Williams, Roebuck. "Typhoid Perforations," H. M. Stuckey, Sumter. "State Board of Health," A. Bethune Patterson, Barnwell. "Infantile Syphilis," Wm. P. Cornell, Charleston. "A Few Suggestions on the Common Sense Treatment of Indigestion," J. Will McCanless.

RESISTING FORCE. The treatment, control and cure of tuberculosis, especially in the incipient stage, is generally conceded to be a matter of rest, fresh air, sunshine and proper diet. Oftimes—a patient needs help,—to keep up body warmth and supply new—resisting force—to the blood.

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Chesterfield. "The Influence of a Model Physician in the Prevention of Tuberculosis," W. B. Young, Rock Hill. "Specialism Among General Practitioners," D. B. Frontis, Ridge Spring. "The Treatment of Ophthalmia Neonatorum," J. W. Jervey, Greenville.

Dr. J. S. Fox, of Charleston, S. C. has been appointed as a surgeon in the United States Army, with the rank of first lieutenant. Dr. Fox is 29 years old, and was born at Batesburg, S. C. He is one of the youngest surgeons now doing work in the army.

Dr. Fox graduated from the Rush Medical College, Chicago, Ill., in 1901.

The widow of the late Dr. Bull, of New York, is to erect a hospital for the study of tuberculosis, and for the care of tubercular patients, as a memorial to her late husband. It is believed that she will locate this institution in some of the Southern States.

Dr. George Ben Johnston, of Richmond, Va., entertained the senior class of the Medical College of Virginia at his offices on the evening of March 6th. An exceedingly interesting sketch, dealing with the history of the Medical College of Virginia, was given by the host, and following this Dr. Evans, of the Memorial Hospital re-

lated some experiences as a physician in China.

Dr. Knowlton's New Hospital.

Dr. Knowlton, of Columbia, S. C. has recently completed and opened a magnificent new hospital. In its appointment every detail has been carefully attended to, and it is difficult to see how the institution could be more complete.

The hospital is a four-story brick building with 33 rooms and will accommodate between twenty-five and thirty patients.

The operating and sterilizing rooms are on the top floor, and are beautifully arranged and thoroughly equipped. All the floors in private rooms are laid in hardwood. The halls and stairs are in tile and marble.

Speaking generally, Dr. Knowlton deserves the congratulations of the medical profession, not only in South Carolina, but in the adjoining States, in building one of the handsomest, and one of the best equipped hospitals to be found anywhere.

Miss Cora J. We'ker, of Philadelphia, is the superintendent.

The Lynchburg, Va., Medical Society was, on March the first, addressed by Dr. W. C. Drewry, of the Central State Hospital, Petersburg, Va., and Dr. Stuart McGuire of Richmond, Va. These two prominent medical gentlemen made fine addresses, and were listened to by the physicians of that section of the State.

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A physician who has prescribed Tongaline for many years sums up his experience with the preparation in the following statements:

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Preventive Medicine.

Lecture and Laboratory courses in Tropical Medicine, Public Health and Sanitation, including school and factory inspection, have been inaugurated at the New York Post-Graduate Medical School and Hospital and will be given with the co-operation of the U. S. Army and U. S. Navy Medical Corps.

Serum Diagnosis and Prognosis in Tuberculosis.

—Courmont's conclusions regarding the agglutination reaction in tuberculosis are as follows: 1. Value of the method. The agglutinating power of serous effusions in tuberculous patients is a very important point in diagnosis and prognosis. It must be studied in all its variations, according to the ages of the patients, localization, form, and degree of lesions, and also in relation to the subsequent reactions which may be obtained. 2. Necessary precautions. In order to make the investigation valuable, seroreaction must be looked for under the most exact conditions as regards the choice of the culture and the general technique of the reaction. 3. Limitations of the method. Given that the agglutinating power of normal serum varies according to age and to the animal species investigated, serum reaction has a diagnostic value only when the degree of agglutination is higher than the ordinary degree of agglutinating power of the serum of normal individuals of the same age and belonging to the same species. 4. Serum diagnosis. For practical purposes the serum reaction must be applied with great clinical discrimination; its results must be compared with the other symptoms and not interpreted blindly. A patient should not be regarded as clinically tuberculous for the sole reason that his serum agglutinates Koch's bacilli. Where there are other symptoms justifying a suspicion of tuberculosis, a positive serum reaction is of great value; negative reactions are of less value. Diagnostically, serum reaction can be considered under two heads: (a) General reaction (with blood serum). This gives no information as to the location of the lesions and indicates only that the system has been or is actually under the influence of tuberculosis. It is for the clinician to interpret this information. It is of especial use in children, in old people, and in adults suffering from chronic or latent forms of tuberculosis. The results in the last class of patients are almost the same as with tuberculin (subcutaneously or in the eye). (b) Local serum reaction. This consists in testing the agglutinating power of serous effusions and indicates the site of the lesions. It is particularly useful for the diagnosis of tuberculous pleurisy, and its results accord with those of tuberculin injection or cytodiagnosis. 5. Serum prognosis. The agglutinating power of blood serum is proportional to the resisting power of the patient, and is in an inverse ratio with the virulence of infection. Serum reaction is very frequently absent in very serious or very advanced cases of tuberculosis. It reaches its maximum height in cases in the process of healing. It can

diminish or disappear sometimes before death; it can, on the contrary, increase where there is a tendency toward healing or arrest. It seems to be an index of the protective reaction of the system. 6. In tuberculous pleurisy with effusion an increasing agglutinating power carries with it a good prognosis, but failing any reaction, must be prepared sooner or later for a fatal result.—Dublin Medical Journal.

Tuberculosis Sanatorium at Salem, Va.

Dr. Robert F. Williams, formerly of El Paso, Texas, has been selected as superintendent of the new State Sanatorium, which is located at Salem, Virginia.

Dr. Williams took charge of the institution March 9th. The property was formerly known as the Roanoke Red Sulphur Springs, and lies on the mountainside some distance from Salem, with which it is connected by a branch railroad. Besides the large frame central building, there are a number of beautifully arranged cottages.

Plans have been made for the remodeling of these cottages for the use of the institution, and it is now expected that the plant will be ready for the reception of a limited number of patients within a few days.

It is the intention of those who are the most interested, to ask the next legislature of Virginia to add several buildings of more substantial and permanent character.

Dr. Williams, the superintendent, was originally from Virginia, and was one time officially connected with the Medical College of Virginia.

The superintendent is well informed about this special kind of work, and no doubt will prove himself worthy of the people of that State.

Dr. Lonnie Robson.

As the result of a dispute with a negro waiter, Dr. Lonnie Robson, of Charleston, S. C., received injuries while in Washington attending the inauguration which has caused him to lose his eyesight. The negro struck Dr. Robson's eyeglasses, and drove a portion of the lens into his left eye. Subsequently his right eye has become involved, which has resulted in his almost total blindness.

The Southside Virginia Medical Association convened in Lawrenceville, Va., March the 8th. This association is composed of the following counties: Sussex, Surry, Southampton, Prince George, Brunswick, Greenville, Dinwiddie, and the city of Petersburg. Dr. C. E. Astrop, of Surry, is president. The committee of ar-

rangements for this meeting were: Drs. F. N. Mallory, of Laurenceville; W. E. Price, Meredithville, and J. B. Halligan, of Smoky Ordinary. Several very important papers were read at this meeting, and the social features were very much.

Dr. Junius F. Lynch, of Norfolk, Va., was recently appointed, by Governor Swanson, surgeon of the Medical Corps, Virginia Volunteers, with the rank of lieutenant-colonel. This appointment is to fill an original vacancy.

Dr. Lynch graduated from the Medical College of Virginia, Richmond, Va., class of 1888.

The Seventh District Medical Association, of Georgia, met in Marietta, March 10th. The meeting was well attended. The new officers for the ensuing year are: Dr. C. T. Nolan, President, Marietta, Ga.; Dr. J. P. Borden, Vice-President, Adairsville, Ga.; Dr. H. L. Irvin, Secretary, Dalton, Ga.

The Association will meet again in Rome, Ga., on the second Wednesday of October next.

The York County, South Carolina Medical Society met in Rock Hill, March 5th, and held an interesting session. Papers were read as follows: "Pneumonia," by I. H. Bigger; "Gunshot Wounds in the Abdomen," by Dr. W. B. Young. As is the custom, the members, after discussion of the papers, dined together at the Carolina Hotel.

Eruptions of the Napkin Regions.—

Adamson (British Journal of Children's states that there are several distinct and characteristic forms of eruption, which are often confused with those of congenital syphilis. Broadly classified they are: (1) Simple infantile erythemas; (2) Streptococcic impetigos; Seborrheic dermatitis. The diagnosis of the erythemic eruptions, especially the erosive and posterosive, from those of congenital syphilis demands a good deal of care, and the author summarizes the features which distinguish them as follows:

- (1) The "simple erythemas" are limited in a most striking manner to the convex parts of the buttocks, thighs, and genitals, and in extensive cases, of the lower abdomen, calves, and heels.
- (2) Lesions are absent from the face and from the palms and soles.
- (3) They have not the characteristic coppery color of the syphilitic eruptions.
- (4) Snuffles fissures of the lips, hoarse cry, opacity of the skin, all signs of con-

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linen, and which has a Specific Action against those peculiar pathogenic germs which infest the Genito Urinary organs Male as well as Female, hence is a

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J. S. TYREE, Chemist, Washington, D.C.

genital syphilis are absent.

(5) The course of the eruption is uneven; it does not gradually advance as does a syphilitic eruption, but it varies from day to day, and it disappears on removal of the conditions of local irritation and regulation of the digestive functions, and without mercurial treatment.

The features which easily distinguish the seborrheic dermatitis from syphilis are: (1) The healthy complexion; (2) The bright red color and granular surface of the patches; (3) The outlying scale-topped papules (the primary lesions); (4) The particular involvement of the flexures.

Some of the Effects of Excessive Smoking.—Mann (British Medical Journal) describes the familiar cardiac disorders following tobacco excess. The writer says that it is obvious that with all physiologically active substances the question of degree is largely determinative of the results produced by any agency that is capable of affecting the health. Most men, if they choose to smoke, can do so within certain limits without injuring their health; some men can exceed such limits with impunity. The extent of the limitation must be determined by each man for himself, and if he is wise he will keep well within the borderline and will hold to his resolution. Here

lies the difficulty; the growth of a habit overrides discretion. The habit of excessive smoking is more insidious in its development than that of excessive drinking, for the results are much less obvious. An alcoholic may be appealed to by his friends or admonished by those in authority; this rarely happens to the adult smoker, unless he consults his doctor about "indigestion and palpitation" and admits that he smokes to excess; then probably the necessary warning will be given.

The Therapeutic Application of Sunlight in Surgery.—Haeberlin (Wiener klinische Rundschau) states that the first influence of sunlight is upon the skin, in which it causes a diffuse reddening and lafer a deposit of pigment in the deeper layers. Excessive sunlight produces erythema, inflammation, and blistering of the skin. This is due to the blue and violet, also the invisible ultraviolet, rays and not to the heat rays, for the same thing occurs in the frigid zone. The body shows after a sun-bath an increase of temperature, oxidation, and hemoglobin. It is possible that the energy of sunlight penetrates to the deeper tissues and influences the internal organs.

The retarding and bactericidal influence of sunlight has been fully demonstrated. In a therapeutic way sunlight has been used in the form of sun-baths for the whole body. In this it has given good results when used with care. For local affections it has been used by Finsen in the treatment of lupus, the rays being concentrated by rock crystal and the heat rays being removed by passing through water. The unfavorable weather in Copenhagen was the chief cause of his later turning to the arc light as a source of light.

Up to the present the best results have been reported from Switzerland, for in the dry, rarefied air of the Swiss mountains there is not much absorption of the powerful ultraviolet rays as they pass through the atmosphere. Here good results have been obtained in the treatment of all forms of surgical tuberculosis, ulcers, suppuration neoplasm. Even in the lowlands of Europe excellent results have been obtained. The author has observed very rapid epithelializing of wounds under the influence of the sun's rays. He has never seen the exuberant granulations and slow healing which often accompany treatment by ointments and bandages. Good results were observed in incised wounds, burns, drainage tracts, and leg ulcers.

The practical use of the sun's rays is extremely simple. The part to be treated should be exposed by an open window for a time varying up to several hours daily,

depending upon the intensity of the light. Sunlight which has passed through the window pane is not useful because the ultraviolet rays have been filtered out. Between the exposures the wound should be lightly covered with gauze.

Asthma: Its Cause and Treatment.

There are three causative factors in asthma: (1) the presence of hypersensitive areas in the nasal mucosa or a special sensitiveness of the gastric mucosa; (2) a special irritant of the pulmonary nervous system which constitutes the asthmatic idiosyncrasy with which the patient was born; (3) the presence of an irritant, *e. g.*, odors, dust, smoke, dietetic errors, etc.

Treatment follows according to this classification. In a given paroxysm inquiry should be made as to the last meal, any obvious exciting cause removed. If the patient is in a bad atmosphere, he should be removed. He should be gotten out of bed, and bolstered up in an armchair before a cushioned table, on which he may rest his elbows and throw himself forward. Ipecac powder will occasionally cut short an attack and permit of a good night. Some patients can get the same relief from pipe tobacco, but all such remedies must be used early. Plain, strong, hot coffee is one of the surest remedies. Alcohol, cocaine and chloroform are all serviceable, but the danger of habit formation must not be forgotten. Stramonium smoking and nitre paper fumes are often efficient. The author's experience with the iodide of potash has been disappointing. The food should be nutritious and easily digestible. Asthmatics should dine early, so as to retire on empty stomachs. Intraanasal abnormalities must be rectified. For intraanasal irrigation the normal salines are better than the usual antiseptics employed for this purpose.—British Medical Journal.

Prophylaxis of Appendicitis.—Witt-hauer (Therapeutische Monatshefte) calls attention to vegetables in the diet, thorough mastication, more frequent rather than heavy meals and faultless digestion. The digestive functions must be kept in good order by physical measures, such as massage and electricity or with bitters, and physical exercise must not be neglected. Bacterial influences must be combated by care of the teeth and the mouth. This is especially necessary in infectious diseases, especially those with localization in the mouth and the nose. The bowels should be kept well open, if necessary with calomel, to which the writer attributes a disinfecting action. The author says that going along these lines might restrict the frequency not only of appendicitis, but of metabolic affections as well.

The Charlotte Medical Journal

VOL. LIX

CHARLOTTE, N. C., MAY, 1909.

No. 5

Longevity.*

By Albert Anderson, M. D., Medical Director Jefferson Standard Life Insurance Co.,
Raleigh, N. C.

"Mens Sana in Corpore sano" is a boon superlative which we may only dare ask from Heaven "with confident and up-lifted face," and how to possess it is now, and always has been, the most sensible consideration. The longer life runs the more beautiful and attractive it should become, and this is the natural tendency under the beneficent laws of moderation and sobriety.

The prognosis of the Tri-State is favorable to long life from the consideration of several points, viz: from its source of numerical strength; its environment; its inheritance; its parentage; and its personal history.

In looking up its progenitors, a man was found who claimed that he was practically the founder and had fathered this great association, and had always considered this his pet and favorite hobby, and I happen to know another member who was equally responsible for its birth, and for him there is no other causal relative name than that of mother.

Ten years ago, when we met in this beautiful city so famed for its true aristocracy of citizenship, this association was in its long dresses, cutting its first teeth. Today we return with a magnificent growth of ten years, enabled to boast of and show to the world a progeny worthy of its noble parentage. Under the careful management of nine of the best men that could have been selected to lead in the development and growth of a Medical Association, this Tri-State has gone forward in a normal and healthy condition. The digestion and assimilation from professional characters of three States, limited to membership of each State Society, have proven to be perfect, as there has been no record of any gastro-intestinal troubles recorded in the Annual Transactions issued from year to year by as competent recorders as ever kept a chart of symptoms for the guidance of an attending physician. Such diet surely would bear the inspection of our National Food Law, and in the continued use of it our condition must continue to point to long life, the consideration of which is the basis for my remarks.

* President's Address, delivered before the Tri-State Medical Association, Charleston, S. C., Feb. 16-17, 1909.

"The wisest man the world ever saw" chose wisdom, and because of this sensible selection length of days was given by God as one of the choicest added gifts from Heaven. Down the ages poets and philosophers have sung and written about longevity, as to its beauty and desirability, and all have come to the same conclusion—with health of body and mind it is the summum bonum of all earthly gifts. All honor to our noble guild, our main endeavor is to bring this into possession of mankind. We are told that only about four per cent. who reach the end of life died from old age. (I have never witnessed but one death from this cause.) Ninety-six percent, therefore, die from diseases and accidents that we, as a profession, are trying to prevent, and our efforts are being more recognized every year by the people and the authorities of Government. A few decades more will prove that our work is increasing the mortality rate from old age.

"Some, as thou sawest by violent stroke shall die

By fire; flood; famine; by intemperance more

In meats and drinks, which on the earth shall bring

Diseases, dire, of which a monstrous crew Before thee shall appear, that thou mayest know

What misery the inabstinence of Eve Shall bring on men."

If thou wilt observe

The rule of "not too much," by temperance taught

In what thou eatest and drink'st, seeking from thence

Due nourishment, not gluttonous delight, Till many years over thy head return. So may'st thou live, till, like fruit, thou drop

Into thy mother's lap, or be with ease Gathered, not harshly plucked, for death mature."

The nature of my work for the past eighteen or twenty months has brought to my mind forcibly the great importance of longevity from a commercial view, so vital to the healthy growth of life-insurance companies. Therefore, every applicant for a policy is scrutinized as closely as possible as to his chances for real longevity, and upon the prognosis of his case he is rejected or issued a policy.

The factors affecting longevity have been worked out by statistics of life insurance subjects in relation to their commercial sig-

nificance. Dr. Symonds has contributed a most valuable paper on over-weights and under-weights as two factors bearing upon mortality for the January number of McClure's Magazine, and I would advise all medical examiners to read this practical paper. Weight and height were first considered without relation to age. This has been proven an element of error, for it has been determined that the influence of age is considerable. The Association of Medical Directors of 1897 had compiled by Dr. Geo. R. Shepard, the first table of heights and weights according to age, based upon 74,162 male applicants accepted for policies in the United States and Canada. So well did Dr. Shepard do his work that his table was identical with that of a table compiled by a committee appointed by the National Fraternal Congress for this purpose in 1900—this committee making 112 weights, 111 being identical with Dr. Shepard's. These weights and heights are based upon applicants shod and clad in the usual clothing. A man's shoe raises him one or one and one-quarter inches, and his clothing weighs 1-18 of his total weight. A woman's shoe raises her 1-12 inches to 1-3-4 inches, and her clothing adds only 1-24 of her total weight. Of course, these vary according to seasons and customs. We do not consider these as factors.

Noticing a vertical column in one of these tables you will observe that the weight increases steadily from top to bottom—each inch adding 3 per cent. to weight. Variation from this rule is found among small men. Running across a horizontal line you will see the weight increases with age up to 45 among small men; up to 50 among middle sized men; and up to 55 and even 60 among the tall men. After observing these facts, one is almost tempted to say that the taller the man, the longer it takes him to reach full maturity.

Women reach their maximum weight more uniformly than men—from fifty to fifty-five years old. Another difference is that women increase in weight more rapidly than men after the age of twenty-five. A man 5 ft. 6 in. gains 11 lb. between ages 25 and 50 upon an average, and a woman of this height upon an average gains 18 lbs. Another interesting thing is that an average woman is 3 inches shorter than the average man.

A curious fact has been found in that the lowest death rate does not coincide with the standard tables. It is found in the class about 5 per cent. below the standard as compared with all classes. Classes below the age of 30, the lowest mortality is 5 per cent. to 10 per cent. above standard. We do not consider a man over-weight unless he goes

20 per cent. above the standard according to height and age. Above this it is a factor worthy of the most serious consideration. Moderate over-weights are those between 20 per cent. and 30 per cent. above the standard. Excessive over weights are those who go over 30 per cent. Percentage of over-weight and age are two fundamental factors. Both moderate and excessive over-weight beyond 28 years of age is a symptom of danger. There is one favorable element in the heavy and that is it counteracts a tuberculous tendency. In this class beware of the pendulous abdomen—it is fifteen or twenty points against the man who is larger around the waist line than the expanded chest. Mortality of over-weights is increased by any infirmity, in personal history or physical condition; and on the other hand over-weight adds much to the gravity of any other defect. Wherever found, heavy weights are to be considered bad prospects, but these are to be graded according to age, personal and family history.

Under-weights are less harmful or better risks than those over. Eighty per cent. of the standard is considered of little effect. But beyond this, "The mortality rises to a point where it is of consequence, especially in the younger ages." Above the age of 30 we can only say that when they are picked with care these extreme under-weights live a good while. So we see the influence of age is reversed as compared with those over. Fat young people and lean old people stand together in their relation to longevity. Under-weights with dyspepsia give a high mortality rate, for so many in this class have incipient tuberculosis not discovered at the time of examination. I never examine an under-weight without thinking of the possibility of incipient tuberculosis, and inquiring into the condition of his stomach, especially if my subject is young. Women weighing 80 per cent. to 75 per cent. of the standard give good results at all ages if personal and family history is good.

There are diseases which we might term peculiar to the above two classes. Under-weights generally speaking bear chronic diseases of the respiratory organs badly? Over-weights, on the other hand, bear these much better, but succumb much sooner to diseases of the nervous system: congestion, hemorrhage, softening of the brain and paralysis of brain origin; diseases of circulatory system, cirrhosis of the liver; diseases of the digestive system; genito-urinary diseases, such as Bright's. So, we see that heavy weights are dangerous, and flesh should be considered a burden and not a reserve fund, as generally considered, by the

laity as well as some of the profession. The danger as compared between under-weight and over-weights is as 96 to 113.

"Our under-weight mortality is rather better and our over-weight mortality rather worse than if both sets had been accepted under exactly the same conditions. But, if we make full allowance for the difference in selection, I am convinced that the same percentage in overweight is a more serious matter than if it were underweight. The excessive weight, whether it be fat or muscle, is not a store-house of reserve strength, but it is a burden that has to be nourished, if muscle, and that markedly interferes with nutrition and function, in fat. This does not apply to the young, those below 25 years of age. Here a moderate degree of over-weight is much more favorable than under-weight. In fact, up to the age of 25 an over-weight not to exceed 110 per cent. of the standard is upon the whole good for the individual. It seems to indicate a certain hypernutrition and robustness of physique that is favorable to subsequent life. Under-weight among these young people, on the other hand, is unfavorable, and in some cases indicates commencing diseases or tendency thereto. But when we pass the age of 30 these conditions are reversed, and the difference becomes marked with each year of age.

"Of course, for the best interests of health, one should be as near standard weight as possible, and that is the sermon which you should preach to your patients, Impress upon them the advisability of their being 10 per cent of the standard, for within that range is found the lowest mortality and the greatest vitality."

"Sir, Well may Fame to you accord the praise
That, spite of adverse stars and nature's strife,
Solely by measured conduct of your life,
Healthy and happy you gain length of days.
Nor stops approval there, but also weighs
The pains you spared not to set others right,
Guiding their footsteps by your beacon light
To long and pleasant journeying through life's maze.
Blest is your lot, who, with a steadfast mind,
Beneath a load of years which many fear,
Contented and felicitous abide
Your voice in song upraised robust and clear
Your thoughts with noble studies occupied,
That good is yours which is for men designed."*Gualdo*.

So may our annual feast of reason, science and *bon hommie* add to our weight according to our age and height that we may have that symmetry of form and physiological function of all the branches in our scientific body, that will bespeak for us another year's healthy growth and thereby prognosticate a long life filled with greater scientific attainments as the years roll by.

A Plea for Conservative Surgery in Compound Comminuted Fractures of the Extremities. *

By J. F. Highsmith, Fayetteville, N. C.

The journals of today contain many worthy and valuable contributions along the various special lines. Abdominal surgery, especially, has received much attention as to methods, both conservative and radical, of treating the numerous conditions, usual and unusual, that a surgeon may meet with, until, indeed, the abdominal cavity is a familiar field to the surgeon, especially if he combines his own experience with that of the men who are contributing articles from time to time in the journals.

In fractures of the extremities and their complications we have not recently seen so much in print—the giving in of experience from the profession—but have to resort to our text-books, plus our own personal experience. While it is true this subject of fractures is an old story, and had been well covered before the days of Lister, yet I claim the advantage in treatment brought to complicated fractures by asepsis are equal to the possibilities asepsis gave to abdominal surgery.

Behind the skill of an operator must be the ability to weigh accurately and judge quickly the advisability of doing or not doing, of removing or leaving, taking into consideration whether or not the patient is to lose or gain thereby, realizing that upon our decision so much is at stake as to the future well-being of our patient.

I have had this most forcibly impressed upon me in the treatment of compound comminuted fractures, with a limb lacerated and torn, the bone crushed. It is a dreadful sight and presents a serious future to the patient viewed from any standpoint. Yet, I shall contend that where we, as surgeons, are in the least ignorant as to the possibility of saving a limb we must give our patient the benefit of the doubt.

It is not my purpose in this paper to go into the histology of bone. Suffice it to say that the healing or union of fractures is not accomplished by the growth of bone cells,

* Read before the recent meeting of Tri-State Medical Association at Charleston, S. C.

but by the production and organization of new connective tissue which seals fragments and is derived chiefly from the periosteal membranes of the bones. That compound fractures heal in a manner similar to those in which no complicating wound exists, unless infection occurs, and then union is most likely to be delayed, or very imperfect. Infection in a compound fracture is the worst enemy we have to encounter next to destroyed circulation of the part.

Knowing this fact and bearing in mind the wonderful regenerative property of bone, its response to injury, and its great effort to span the fracture, the important part that even a small periosteal bridge plays in the process of repair, and nature's wonderful ability to take care of a great amount of injury, as well as infection, then it must necessarily follow that we should be conservative in our treatment of compound fractures, and unless we are absolutely sure at the time that the blood supply is cut off the limb should not be amputated, be it ever so badly comminuted, but every effort made to save it. No matter how crushed the bone may be or how lacerated the tissues, temporize and give nature a chance.

Nowhere has aseptic surgery done more than for cases of this kind. Thousands have not only lost their limbs, but their lives before the days of aseptic surgery—all honor to Lister. We are no satisfied merely to keep the patient from death, but it is our desire to send him back to life and usefulness with as little deformity as possible, as a result of the misfortune.

I herewith cite a few illustrative cases that have come under my care in the last few years.

Case No. 1—Mr. J., aged 40, a merchant of heavy build, was thrown from his buggy, fracturing the lower end of the tibia in its articulation with the astragalus, also the fibula in its lower third. The end of the bone of the tibia penetrating the tissues stuck into the ground, the joint laid wide open, and the end of the bone ground up and filled with clay. The patient was brought in in this condition—the foot dangling and with a tendency to turn outward. Under anaesthesia the wound was carefully irrigated with a 1 to 5-1000 bichloride solution, removing all foreign matter as thoroughly as possible. Then the fracture was put up in a box splint and the ends placed in as good position as possible by packing around them sterile dressings, the limb kept slightly elevated, and dressed as often as necessary to keep it thoroughly clean, being most careful at all times in our technique to prevent any infection from an ex-

ternal source. A drainage tube was placed through and through the joint, and for the first four days a continuous irrigation kept up with creolin solution. This patient made a fair recovery, but for a splinter of bone which extended down from the inner fracture of the tibia. In two months after the patient left the hospital he returned and I chiseled off this bony splint and the patient was entirely relieved. He now has a useful foot, giving him no trouble whatever.

Another case similar—Mr. K.,—age 43, a carpenter, had fallen 18 months before I saw him and sustained a fracture of both bones, tibia and fibula, near the ankle joint. The tissues were torn, the bones penetrating and from the history he gave his case was very much like the one I have just cited. But his surroundings were not such that he could have the aseptic care, consequently the joint became infected and the wound remained open with a general bone necrosis and was discharging foul smelling pus, with the joint very much enlarged. The skin on this area was of a purplish hue and very tender, and the patient, of course, not able to use the foot.

In this case I did a resection of the ankle joint, removing two inches of the tibia and fibula, with the top of the astragalus, it being necessary to go this high up to get healthy bone, the most careful technique being employed. The leg was put up in a plaster cast, leaving a window on each side for the drainage tube, also opening the cast in the median line in front so that it might not become too tight, in other words a moulded plaster splint. Through and through drainage was established and the joint continually irrigated with creolin solution. At the end of six weeks the limb had shortened and regained sufficient tone of the tissues to allow us to remove the permanent splint, continuing the sterile dressings with a good firm bandage it was all that was necessary to hold the foot in good position. This case by the use of a shoe with a thick sole and heel is able to walk with ease.

Had this case had the proper antiseptic handling in the beginning, and infection avoided, he would have suffered much less and been well sooner.

Mr. C., age 20, conductor on a freight train, was brought into the hospital, having suffered two hours previous from a compound comminuted fracture of the right leg just above the ankle, the wheels of one car having passed over this limb.

On examination of the lower end of the tibia and fibula for about three inches were found to be badly crushed. the foot partially turned on its inner side. A small open-

ng near the internal malleolus about the size of a quarter of a dollar, and a large, soft, pulpy swelling near the outer malleolus. Under anaesthesia the limb was thoroughly cleansed with sterile water and green soap, then rinsed with 1 to 5-1000 solution of bichloride of mercury. At this point, from the pulpy condition of the tissues I felt like opening the parts for free drainage, but realizing that the swelling was due to hemorrhage and that the contents or the swelling was sterile, the wound, after being made as clean as possible was wrapped with sterile gauze, the foot placed in normal condition and a moulded plaster splint applied, which was daily removed, the wound carefully cleansed and redressed with sterile gauze. At the end of 48 hours the pulpy swelling at the outer malleolus was opened and the clots and mascerated tissue gently irrigated so that as much of it as would might come away, the rest left to be thrown off later. My reason for not opening the large pulpy mass the evening before was that the clot would check further hemorrhage, and certain elements in it would be used by nature in re-establishing the vitality of the parts. There was so much swelling of the limb at this time, at the end of 48 hours we thought it best to put the limb on a pillow splint and a continuous irrigation kept up with a solution of creolin, while this limb was swollen dreadfully, large black blisters up to the knee. Sloughing was not so extensive, but as long as there was any irrigation was kept up, the wound being dressed every day. By the end of the third week the bones were united to the bones above, and by the sixth week was firmly united and the wound healed. At the end of the seventh week the patient was able to walk by the aid of crutches, and the ankle, though stiff, was becoming less so, and is progressively getting better. The patient now uses his ankle with but little trouble—the accident having occurred on Nov. 28, '08.

Case No. 4—A little girl, age 7 years, during a street parade fell from a float on which she was standing with a number of other children, one of the wheels of the large wagon passed diagonally over her right leg from ankle to knee. The tibia was broken in the lower third, also in the upper third; the fibula broken in the lower third, the leg having several long, deep, ragged lacerations extending down to the bone from the knee to the ankle. The dry crushed bone beneath could be plainly seen. Under anaesthesia the wounds were carefully cleansed of all earth and bits of clothing, many sutures taken, care being exercised to allow as free drainage as possible. The parts thoroughly irrigated and cleansed

with a 1 to 5-000 bichloride solution following with a hot normal salt solution. Sterile dressings applied and the limb placed in plaster of paris for 24 hours. My idea for using the plaster of paris dressing is to mould the parts and serve as a firm protection for the first few hours. Of course, it must be carefully watched against extreme swelling.

This patient was shocked considerably and her temperature arose to 105, and she had a marked traumatic delirium. At the end of 24 hours the first dressing was removed, the wound carefully cleansed and redressed with sterile dressings. The leg was then put up in a pillow splint and kept moist with a slow but continuous irrigation of bichloride solution 1 to 5-000. Sloughing was great; leg dressed every day. The patient gradually becoming more comfortable after 48 hours, temperature, however, ranging from 98 to 102 for the first two weeks; at the end of three weeks was normal, with only an occasional rise. The bones at the lower end of the leg showed little disposition to unite, but the foot was kept in position and the leg held in a firm support, and at the end of the fourth week union had begun; indeed, the fracture at the upper end of the tibia had united before this time. In the meantime the bichloride solution was changed to a creolin solution for keeping the wound continually moist, which was kept up until the sloughing ceased and granulation had begun. At the end six weeks the splints were left off, the bones having sufficiently united in that time, but a very extensive flesh wound still granulating, which, of course, will be completely healed.

This patient has the leg and foot in good position and all chances of its unimpaired usefulness to the child.

Case No. 5—Mr. A., a farmer, got his right hand caught in a cotton gin, having the fingers of the right hand, with the exception of the thumb and a portion of the index finger, torn off, and the back of the hand badly lacerated, the tissues torn to the bone and a friction burn. Several long ragged tears of the forearm with a compound comminuted fracture of both radius and ulna midway between the elbow and the wrist.

The parts were thoroughly cleansed with a bichloride solution, and all tissues removed that were absolutely lifeless, the parts brought together as best possible by occasional sutures of silk, and the arm placed in an anterior splint thoroughly protected by aseptic gauze dressings with a light splint on the posterior part of the arm. The fractured radius and ulna were held in as good position as possible—the dressings

changed daily. Considerable sloughing ensued. By the end of the fourth week the bones had sufficiently united to discontinue the use of the splint, and at this time granulation had sufficiently developed on the back of the hand and arm that we could skin-graft, and thereby hasten the convalescence. The patient now has a useful arm with the thumb and part of the index finger left.

Case No. 6—Similar to this, only worse, the result of a cotton-gin injury, where the man had previously lost his right arm in a railroad accident, making it all the more important to save his left arm, was conservatively treated similar to the case I have just cited and left with a fairly good arm.

Case No. 7—Although not a case of compound comminuted fracture it shows how aseptic combined with antiseptic treatment saved a young man's leg, if not his life.

Mr. J., a machinist, age 21, was brought into the hospital suffering from a gun-shot wound through the calf of his right leg. A shot-gun had been fired at close range tearing through the muscles making a wound sufficiently large to introduce the hand. The wound was filled with shreds of tissue, bits of clothing and coal cinders. This patient had bled profusely and was severely shocked. The wound was carefully cleansed and sterile dressings applied.

The limb rapidly became swollen and purple, with a profuse discharge of very foul odor. After being thoroughly cleansed and particles of necrotic tissue removed a large drainage tube with gauze around it was drawn through the wound. At the end of 48 hours the gauze was removed and the creolin solution begun and a continuous irrigation kept up for five days. At the end of this time the swelling had begun to subside—the temperature had reached normal. Six hours after the accident the patient's temperature reached 105, and all during the time the wound was sloughing temperature ranged from 103 to 105. At the end of six weeks the patient was entirely well and able to leave the hospital with a useful limb.

Case No. 8—Another case—a young man was brought into the hospital under similar conditions, but on the fifth day after the injury. This patient was shot in the calf of the right leg. The tissues were not very badly lacerated, the patient being able to work the day after the accident, and on the second night after the accident the limb was painful and much swollen; the third day much worse, and the fourth day, as the patient expressed it, "the leg bursted." On the fifth day after the accident the patient was brought to the hospital in a very alarming condition.

On examination the whole limb from hip to toe was immensely swollen, from knee to ankle a deep purple, with large purple blebs scattered over the skin, the limb cold, and every few seconds a popping sound like the bursting of the skin of a baking apple, then through the place where the shot entered would be seen a bubble—a stream of bloody pus with the most foul odor. On palpation a creptus could be plainly felt over the leg at any point and on the thigh to within two inches of the groin, following the course of the femoral artery, the area being about four inches wide.

The patient was very septic and delirious with very rapid pulse and marked leukocytosis. In this case, as you all know, we had a case of malignant edema, and the only remedy was to amputate at the hip joint, which was successful, fortunately saving the patient's life.

If this case had had the proper care in the beginning doubtless this alarming septic complication could have been avoided.

Many other cases could be cited with their respective complications, but just these few are sufficient for the purpose for which this paper was intended.

In conclusion let me urge that we regard every open wound as an infected wound, therefore, using the most painstaking aseptic and antiseptic technique in the handling of the case, thereby avoiding further infection, and the non-interference with the wound, as far as it is practical, as we in this way lessen danger of infection of the wound through unnecessary contact (with fingers and instruments.)

The general principles I have used in carrying out treatment for these cases are as follows: Thoroughly disinfect the skin in the vicinity of the wound, then irrigate the wound with a 1 to 5-000 bichloride solution, cleansing and reducing the fragments of bone which project through the wound. The skin in the vicinity of the wound is thoroughly scrubbed with green soap and sterile water, being careful to rub away from the wound. Where the edges of the skin were ragged they were freshened and the greater portion of the wound in the skin sutured, using drainage and continuous irrigation as the case demanded. It has not been my method to close the wound completely after disinfection, as is the custom of Trendelenburg.

The limb is placed in a good position, sterile dressings applied, and the moulded plaster splint has been mostly used, occasionally having to resort to the pillow splint. The dressing has been changed daily for the first few days, or oftener as symptoms demand it, and the continuous irrigation with an antiseptic solution if sloughing is

extensive, being careful when dressings are changed not to disturb the position of the limb. As it is usually a case of resetting the limb and any disturbance of its position causing great suffering to the patient, as well as upsetting results of what nature has done in the way of repair.

Provision should be made in the application of any permanent splint which is employed, for the dressing of the wound. The case must be most carefully watched for any signs of infection or injury of vessels.

A close watch is kept on the patient's general condition, temperature and pulse, the bowels kept open and the kidneys active. Liquid diet alone being given as long as there is fever. Where infection occurred its treatment depended upon the type of infection. In the case of gas bacillus infection (malignant edema) high amputation was done.

These cases are long tedious ones for both patient and surgeon, but time is no object when the loss of a limb is the question at stake, and we feel amply repaid for the painstaking care we have contributed when we can send our patients home, not marred and crippled, but ready for their respective vocations in life.

Report of Some Interesting Cases of Eye Injury in Railway Practice.*

By Dunbar Roy, M. D., Atlanta, Ga.

At the meeting of this association at Mobile several years ago, I read a paper on the above subject and reported several cases of severe injury which had occurred in my railroad work. Since that time I had several other equally as severe which were not so fortunate in their termination. The management of these and other cases, coupled with a wider experience, has led me to change some of my old ideas and to adopt different procedures from those previously adhered to. These remarks are applicable more especially to penetrating wounds of the eyeball where the injury may be followed by the total destruction of the globe at the time or later as the result of severe inflammatory reaction. It is impossible for any one to prognose the probable result of an eye injury, for the same character of eye injury in different individuals behave in many instances in quite diverse manner. Furthermore, it is impossible in the management of eye injuries to lay down any fixed rules, as one would be lead to believe in reading the various text-books on this subject. Every surgeon knows that every injury is a law unto itself, consequently the report of

various cases, the character of the injuries and the final result in their treatment, is always much more important and conveys decidedly more practical information than pages of theoretical reasoning. To carry out this idea, I shall report several cases which are interesting in many of their clinical features and which can always add to the sum total of our clinical knowledge.

Case 1.—Rupture of the Cornea with Particle of Coal in the Anterior Chamber.

W. C. V., white, age 35., fireman on Southern Railroad. While breaking some of the large lumps of coal on the engine was struck in the right eye by a small piece. This happened near Suwanee, Ga., while on his regular run about 9 in the morning. There was immediately severe pain and dimness of vision. He bound his eye up with a handkerchief and immediately returned to Atlanta where I examined him in my office about 5 o'clock the same day. When seen the patient was suffering but slight pain. The eye was cocainized and thoroughly examined. Vision was fingers at two feet. There was an oblique rupture nearly across the cornea with collapse of the anterior chamber. A piece of coal 3 by 4 mm. was seen in the anterior chamber resting on the lower part of the iris. Under strict antiseptic precautions the particle of coal was removed with a pair of forceps after several attempts. The eye was then thoroughly irrigated and the patient kept in the office until the pupil was dilated under the use of atropine solution.

Bichloride vaseline was then put in the eye and a compress bandage applied. Just here I wish to commend the use of this vaseline in all abrasions, cuts and injuries about the eyes which experience shows will save many an eye from future infection while nature is regenerating the parts. This bichloride vaseline is made according to the formula of one of our members, Dr. J. A. White. The eye progressed fairly well except considerable iritis intervened, which delayed the healing of the eye. One month later the corneal scar was quite evident, but all irritation rapidly subsiding.

Two months later, with the exception of the corneal scar, to be seen only under strong illumination, the eye appeared normal. Vision equalled 20-50. Two small points of opacity were also found in the lens, but these have remained stationary.

The result in this case I considered most fortunate, because a blow severe enough to rupture the cornea and take with it into the anterior chamber a particle of coal, was certainly severe enough to have done injury to the lens and the internal structures. I was also fortunate in having seen the patient so early after the accident and in this way been

*Read before the Association of Surgeons of the Southern Railroad in Jacksonville, Fla., April 5-7, 1909.

able to remove the particle of coal through the original wound before any reaction had occurred.

Case 2.—Rupture of the Cornea. Preservation of the Globe, Diminished Vision.

C. C. W., white, age 42, engineer on the Macon Division of the Southern Railroad had a most peculiar accident at 12:30 a. m. on April 3rd, 1900. While running at full speed twenty miles before reaching Macon and while sitting at the throttle, a dove struck the cab window directly in front of him with such force that it went right through the glass and struck him in the right eye. He was stunned for a moment and there was quite a little bleeding from his eye and considerable pain. He held a handkerchief to the injured eye and carried his train into Macon. On reaching that city, he bound his eye up, and as he was then suffering but little he ran his train back to Atlanta. I did not see him until the next day at 6 p. m.

Examination.—Patient suffering but little pain. Some ecchymosis of the lids and slight congestion of the ball. At the center of the upper portion of the sclero-corneal margin there was a vertical rupture 5 mm. long, mostly in the cornea. The pupil was elongated on account of the iris being adherent to the wound. Anterior chamber was full, and close examination showed a small lenticular opacity just behind the seat of injury. Vision was 10-200. Atropine and compress bandage was used and the eye rapidly recovered from all irritation. Two weeks later showed the absence of all congestion and vision was 15-200. Eighteen months later vision was 15-100 and the lenticular opacities were about the same. On account of his long, faithful, and very competent service the patient was placed again upon his old run. On January 5th, 1902, this engineer was killed in a wreck at Rex, Ga., near McDonough, but the investigation showed no error on his part.

These last two cases show the important fact that opacities in the lens produced by injury do not always mean a complete traumatic cataract, but that small opacities produced in this manner may remain stationary the balance of the patient's life.

Case 3.—Cut of the Upper Lid with Rupture of the Globe followed by Complete Atrophy.

W. H. P., white, male, age 22, blacksmith at Southern shops. May 16th, 1900, while hammering an iron pipe a particle of steel flew off the hammer and struck the patient on the left eye. There was immediate pain, some bleeding and almost complete blindness. Two hours later I examined him in my office with the following result: The upper lid of the left eye was cut entirely through at its center from above

downwards. Just beneath the cut there was a small rupture of the eye-ball 3 mm. outside of the sclero-corneal margin and a little to the temporal side. At the point of rupture there was a small bed of vitreous. Vision was 0. There was no pain and even the pupil responded to light. Atropine solution was instilled which caused a complete dilatation of the pupil.

Ophthalmoscopic Examination.—No fundus reflex could be seen, due to hemorrhage in the vitreous. Hirschberg's magnet was used, but this gave no evidence of a foreign body in the vitreous. In fact the history of the traumatism would have indicated that no particle of steel had penetrated the globe, but the use of the magnet was only a precautionary measure on my part since I did not have at my command a radiographer X-Ray, for locating foreign bodies within the eye, may be of some practical value to the oculist who has the assistance of an expert in this special line of work, but ordinarily they are of no value whatever. As the rupture was well approximated no suture was taken, but the eye was well cleansed, bichloride vaseline placed upon the ball and a compress bandage applied.

June 4th.—Atropine has been regularly instilled and compress bandage kept up continuously. The pupil is well dilated, but the vitreous and fundus reflex is still dark. Vision is only perception of light. No pain and the ciliary injection is very slight, but the eye-ball itself is decidedly soft. This treatment was continued and six weeks after the injury the result was as follows: There has been no pain and all irritation has subsided. Vision barely the perception of light. Eye-ball very soft and fast undergoing atrophy. Blood in the vitreous has become organized into a membranous condition. Right eye perfectly normal with no signs of irritation. Patient was allowed to return to his work with instructions to return at the slightest symptoms of irritation in either eye.

This case in conjunction with six or seven others, has taught me the gravity of such an injury as to the final result. Whenever the eye-ball is ruptured outside of the sclero-corneal margin and there is free hemorrhage into the vitreous, even if there is no foreign body within the globe, the prognosis for future vision is practically nothing, and even for retaining the shape of the ball the chances are exceedingly slim. Experience has taught me this one point, which I am sorry was not used in this case, and that it is always best to take a suture in even small ruptures and draw the conjunctiva tightly over the rupture. The suture should be placed to one side of the rupture and made

so that the conjunctiva completely covers the wound and is done in conjunctival grafts for corneal ulceration.

In doing this operation, however, I know of nothing which requires more perfect asepsis or more gentle technique than the taking of a suture over a gaping wound in the globe. Severe hemorrhage into the vitreous with an attendant rupture through the sclerotic coat and conjunctiva, always offers an unfavorable prognosis, while such a hemorrhage without rupture is not always quite so grave in character. This was impressed upon me several years ago by a case which came to my clinic at the old Southern Medical College. A colored boy, aged 25 years, was accidentally struck in the left eye by a nail rebounding from a piece of wood. Twelve years before, his right eye was removed because of severe injury. Examination showed a severe injury, hemorrhage in the vitreous but no rupture. Vision was scarcely perception of light when brought to the clinic the day after injury. Pupil dilated well under atropine. Fortunately for this young fellow Divine Providence aided us both, and under increasing doses of the iodide of potassium and pilocarpine the final result was such that he is today working as a porter in a store. This was certainly a most happy termination, and if there is anything in the old idea that when one eye is destroyed all its strength goes into the other it was certainly exemplified in this case.

Case 4.—Rupture of the Sclerotic. Vitreous hemorrhage. Atrophy. On May 7th, 1901, a train hand on the Southern, while cutting some pieces of railing, had a piece to fly up and strike the left eye. I saw him two hours later. Examination showed a rupture in the sclerotic at the inner and lower quadrant and also a cut in the lower lid. The electro-magnet was used, but it gave no signs of a foreign body in the globe. There was some pain, and vision was reduced to zero. There was a slight sign of vitreous at the wound and a conjunctival suture was taken so as to close tightly the rupture. Atropine and compress bandage was applied. This was the only treatment used because there was scarcely any pain and reaction and no signs of infection. Pain and irritation rapidly subsided and the wound closely perfectly tight, yet the final result was complete atrophy of the ball.

Case 5.—Piece of Steel in the Vitreous not detected by the magnet. Apparent healing, with removal of the eye six months later because of severe Irido-cyclitis.

W. T. S., white, age 38, boiler maker at the Atlanta shops, while driving rivets on afternoon of December 9, 1904, suddenly felt a particle of steel from the hammer

strike the right eye. There was much pain, so he bound his eye up and consulted me at the office the following morning.

Examination.—There is a sclero-corneal rupture at the lower part of the eye with protrusion of the iris. Scarcely any pain and the anterior chamber has refilled. Vision was large objects when held close to the eye. The ophthalmoscope showed a linear streak running back from the point of rupture to the fundus of the eye. The fundus could be readily seen and in the vitreous was seen a streak of a membrane looking like a blood clot. To the temporal side of the optic disc in the retina, and choroid could be seen a redish black discoloration and below this a distinct hemorrhage. I was unable to tell whether this was the piece of steel. The protruding iris was removed and the giant magnet thoroughly tried without evincing any signs whatever of a foreign body.

A skiagraph was taken but this gave us no decided information. Under the circumstances I decided not to attempt any further operative interference in trying to remove a foreign body which certainly had penetrated the eye. A few years before this I had seen a small piece of steel which had become encysted in the retina and had already been in the eye for twenty years. Atropine was used and also a compress bandage. The eye gradually healed without the patient suffering much pain or discomfort. Vision still remains the same, as the blood clots have become organized. There is no change in the appearance of the supposed foreign body in the retina. February 15, all irritation having subsided, the patient was allowed to return to his work and to report to me at the first signs of any irritation in either eye.

On May 2nd, 1906, one year and five months later, the patient again presented himself at my office with a severe plastic irido-cyclitis in the injured eye which had been present for three days. On account of the severity of the case he was immediately sent to the hospital and the eye enucleated. Healing was uninterrupted and the patient had no further trouble. The enucleated eye was cut open and in the vitreous there was found a small piece of steel. Evidently the foreign body had become dislodged and this had caused the inflammatory reaction. This case very forcibly illustrates the fact that no eye is safe when it contains a foreign body, no matter how long an eye remains quiescent.

Case 6.—Rupture of the Cornea, Swelling of the Lens. Severe Irido-cyclitis, Enucleation of the Eye.

J. D. C., white, age 52, car inspector, was injured on December 8th, 1904, by the bursting of a lubricating glass while in-

specting an engine. Particles of glass struck him in the left eye which was immediately followed by some bleeding and pain. The eye was washed and bandaged and the next morning I saw the eye at my office.

Examination.—Very little pain in the injured eye. There was a triangular cut entirely through the cornea at the nasal side with complete collapse of the anterior chamber. The iris was not prolapsed, but was entangled in the lips of the wound. The lens was injured and fast becoming opaque. Under cocaine the wound was examined thoroughly for any particles of glass but none were found. A piece of membranous tag, evidently a part of the lens capsule, was cut from the wound, the eye thoroughly cleansed, atropine instilled and a compress bandage applied. December 10th, the patient has suffered very little pain, but there is considerable congestion. The atropine has had very little effect upon the pupil. The wound still remained open in spite of the firm compress and the lens was continuing to swell. This same treatment was continued daily, but on account of the severe inflammation and the fact that the ball was becoming softer the eye was enucleated. The patient made an uninterrupted recovery and is now wearing an artificial eye. No particles of glass were found in the enucleated eye.

This case is exceedingly instructive. In the first place it showed me that it is almost impossible for a triangular wound of the cornea to coaptate and heal with a traumatic, swollen lens inside of the eye. Since that time I have never had identically the same kind of injury, but I am firmly convinced that the proper management of this case would have been to make a new corneal section and to have removed the injured lens in the first three days after the injury. Not only would it have lessened the pressure within, but the irido-choroiditis might not have been so severe. It is exceedingly probable that no line of treatment would have saved this eye, but in the future I will certainly try the latter procedure.

As a companion to the above I wish to report another case, not however of railway injury, to show how different results follow somewhat similar injuries. Jessie A., boy aged 10 years, of McDonough, Ga., was struck in the right eye July 21, 1908, by a piece of barb wire fence. I saw him the next day and noted the following: A 3mm. cut was seen near the center of the cornea. The iris was not prolapsed, but adhered to the wound. Anterior chamber collapsed and the lens fast becoming opaque. There was absolutely no pain or congestion. Atropine and compress bandage was ordered and the patient allowed to return home un-

der the observation of his physician and to report again if the eye did badly. I did not see or hear of him again until four months later when his father brought him to my office. The eye had healed perfectly and the lens was rapidly becoming clear. Vision was then the counting of fingers at seventeen feet, with the probability that he would in the future have still better vision. In this case a traumatic cataract occurred as the result of the injury, but on account of the age of the patient it was again absorbed just as juvenile cataracts are absorbed by needling. Fortunately for him no iritis developed to cause still further complications.

One other interesting case and I will relieve your patience.

T. N. N., white, aged 33, pumper at Ellenwood Station, while cutting rock June 26, 1908, had a particle to fly up and strike his right eye. Patient experienced very little pain and was sent to me on the next day. I found considerable congestion about the eye, but very little pain. The lower portion of the cornea was a little hazy and one point gave the appearance of a minute opacity. Anterior chamber and iris appeared normal. On the iris just behind the small white scar in the cornea there was a small foreign body about the size of two pin heads existing on the iris, which looked a little like a piece of rock. It seemed strange, however, that such should be the case, as the cornea showed such little traumatism and the anterior chamber was of normal depth. I decided, however, that it was a foreign body and under cocaine anesthesia I removed it with a small piece of the iris. It proved to be a piece of granite. There was no reaction and in two weeks the eye had entirely healed and the patient today has normal vision. Had the foreign body not been removed it would no doubt caused a severe inflammation with the possibility of the loss of the eye. In all these cases it is better to remove a small piece of the iris with the foreign body attached, thus making a small coloboma iridis, than to try to pull the foreign body with forceps and run the chance of its getting behind the iris. In the case of metallic substances like iron or steel the electro-magnet might remove the foreign body, without sacrificing the iris.

Sineon Snell in the British Medical Journal for December, 1907, has a very extensive article on wounds and injuries of the eye-ball, and his conclusions agree very materially with my own experience. Mr. Snell, who lives right in the midst of the great iron and steel industry of England, has had perhaps more experience with this class of eye injuries than any other man in the world, and his views most certainly have great weight. In regard to wounds

of the sclerotic, Suell says that the edges should be drawn together by a suture of the conjunctiva. That the eye ruptures from a blow from its thinnest part, behind the sclero corneal junction. His experience is that these cases do badly, as the eye shrinks and should be removed early as it is a menace to the other eye. Every eye injury, no matter how trivial it may seem, should be most thoroughly and minutely examined.

These cases reported are of interest because they exemplify some of the various injuries which are liable to occur in railway work. Each case is a law unto itself and must be so considered. A great many other cases have occurred in my railway work which are also of much interest, but time does not allow a more extended report. From these cases, and from further experience, I would draw certain conclusions which I believe are safe rules to follow:

1. Rupture of the sclerotic coat with severe hemorrhage in the posterior chamber, offers an exceedingly unfavorable prognosis, even for the preservation of the globe itself.

2. Rupture of the cornea, even with hemorrhage into the anterior chamber offers a much more favorable prognosis.

3. As a general rule it is better to remove all particles of protruding iris at once, and if it should be necessary to do this later after a cicatrix has been formed, a conjunctival graft should be used.

4. Sympathetic inflammation is no myth, but must always be considered wherever the iris is left incarcerated in the wound.

5. After a severe injury to the globe, accompanied by severe iritis, and possibly irido-choroiditis with decided softening of the ball, it is better to enucleate at once and thus save the patient weeks of suffering and a possible sympathetic ophthalmitis.

6. Conservatism in eye injuries should mean the preservation of one good eye rather than the final preservation of two defective eyes or possibly eyes with no vision whatever.

Grand Opera House.

Eclampsia.

By Arch Dixon, A. B., M. D., Ex-President of the Kentucky State Medical Association; Ex-President Mississippi Valley Medical Association.

As the years go by we are confronted every now and again with a new theory as to the etiology of eclampsia. Theories are only theories and among them may be facts, but none convincing enough upon which one may hang one's hat and say, we have arrived.

Eclampsia may be defined as a symptomatic disorder, characterized by convulsive or epileptiform seizures that suddenly come on prior to, during, or after labor, the

cause of which we do not know.

Personally I believe the disease to be an auto-intoxication dependent upon the absorption of poisons which have their origin in putrefactive and fermentative products formed in the intestines, and which the liver has failed to arrest and destroy as they pass through it. The result is an altered metabolism; irritation of the kidneys which are unable to eliminate the poisons which are in excess in the blood. The kidneys become less permeable and consequently the urine is less poisonous, the toxemia deepens until finally we have the symptom-complex of eclampsia. The burden of elimination may be increased by the presence of poisons which are formed in the fetus, and circulated in the fetal blood. Broadly speaking, all forms of disturbances in pregnancy from the milder infections to pernicious vomiting, eclampsia and the fulminant type, as expressed by acute yellow atrophy of the liver, are due to auto-intoxication which has its origin from absorption of intestinal poisons, followed by insufficient action of the liver and kidneys and disturbed metabolism. The pathological findings of eclampsia, pernicious vomiting and acute yellow atrophy of the liver seem to be almost identical, and point to a common origin. (1) The lesions found on autopsy (by Schmorl) consist of degeneration and necrosis of the cells of the liver lobules. In pernicious toxemic vomiting and acute yellow atrophy, the necrosis begins in the center of the lobule and extends outward; in eclampsia the necrosis begins at the periphery of the lobule and extends inward and is associated with fibrinous capillary thrombi. The degenerative kidney changes, which are secondary, vary from a slight cloudy swelling to a severe glomerulo-nephritis.

The findings of Schmorl are confirmed by Williams, Lubarsch, Prutz, Bar, Guyeisse, Bouffe de Sainte Blaise and others. In addition to the capillary thrombosis, Schmorl found in the vessels large multinucleated cells and from these facts he concluded that the disease is essentially due to the presence in the blood of a coagulating ferment formed either by the degeneration of the free placental cells found in the blood or by degenerative changes in the placenta itself.

(2) In order to test the toxicity of the placenta, Freund (3) made experiments on 200 animals with the extract of 53 placentas. Two principal causes of death were found—thrombosis, due to fibrin ferment, and a peculiar agent that poisoned the respiratory center. The poison had no action when given subcutaneously or intra-peritoneally. It must be introduced into the system intravenously. Freund believes that his experi-

ments show that the placenta contains considerable toxic material, which when introduced into the maternal blood cause changes analogous to those produced by toxemia of pregnancy. Lipmann believes that the origin of the toxemia is found in the placenta. Veit that portions of chorionic epithelium floating in the maternal blood are responsible for the condition. Hoffbauer, Weishardt and others also believe that the toxins are generated in the placenta. Blanc asserts that some cases of puerperal eclampsia are due to an organism which causes infectious nephritis and which appears itself to generate a convulsive poison. Pajot says the cause of eclampsia is reflex, culminating in a cerebro-spinal centre in close proximity to the disorganized centre which presides over the existence of albuminuria. Herff maintains that the eclampsia symptom-complex is dependent on a peculiar irritation change in the psychomotor centres of the cerebral cortex (subcortical centres). Santos states that eclampsia is an acute peripheral epilepsy, having its origin in the uterus. Hergott attributes the disease to a toxin produced by a special microbe acting upon the nervous system, already prepared by the gravid state; Zweifel believes the fetus to be the nidus from which the toxins are derived; Albeck and Lohse the amniotic fluid, and others think deficiency of the parathyroids, and Nicholson and Lauje believe that if the thyroids do not enlarge during pregnancy these conditions of toxemia will develop. Many other theories have been advanced but so far no one has been justified in pronouncing a "*quod erat demonstrandum*."

The view, long held, that eclampsia depended upon interference with the renal function by pressure of the gravid uterus on the renal vessels is still believed by some, but has been negated and set for naught by the fact that no such disturbance was produced by pressure exercised by ovarian and fibroid growths, and furthermore it is known that when risen above the pelvic brim the gravid uterus exerts no such mechanical interference with the kidneys.

Modern belief teaches that eclampsia is the result of a toxemia and the trend of medical opinion seems to lean toward the belief that the toxemia is due to auto-intoxication. Thus Bouchard (4):

"It cannot be questioned that during pregnancy poisons are formed in the mother and fetus which circulate in the maternal and fetal blood. Upon the mother is thrown the burden of eliminating by the kidneys, liver, intestines, skin, and lungs the bulk of the poison formed within the two organisms. If elimination is not properly carried on auto-intoxication is produced which

varies in degree from heightening of the arterial tension, headache, gastric disturbances, and lassitude, to convulsive seizures. The urine under these circumstances usually contains albumin. The presence of these toxins in the blood induces structural alterations in the renal epithelia and as a consequence, renal debris—tube casts are present with the albumin. If the patient lives, the morbid changes are for the most part temporary—disappearing on the termination of pregnancy. In addition to the anasarca, usually manifested in the dropsical legs of women due to auto-intoxication from intestines and kidneys, there is an hepatic toxemia as well. The liver becomes enlarged and tender, the patient slightly jaundiced, the stools pale, fluid appears in the abdominal cavity, and there are albumin and bile in the urine. It is not until the pregnancy has been brought to a natural or an artificial termination that the symptoms and physical signs disappear. In these cases the liver has failed to arrest and destroy the intestinal poisons as they pass through it and the result is, that owing to their excess in the blood and inability on the part of the kidneys to eliminate them, the patient is poisoned by products formed in her own body."

It cannot be claimed that renal insufficiency, even in nephritic cases, is the primary cause of eclampsia; it is far more probable that the etiology of the condition is to be found in defective hepatic activity. Tarnier has demonstrated that under normal conditions a certain amount of fatty degeneration of liver cells is present during pregnancy. Isn't it fair to assume that during pregnancy an imperfect elimination of the non-nitrogenous products of retrograde metamorphosis, due to the fatty degeneration of the liver cells, has interfered with the equipoise presided over by the antibodies in the normal body, and caused a lowering of the vitality and a lessened resistance to toxins? It is when the vitality of the tissues is reduced that microbes find conditions most favorable for their development. During pregnancy it is generally admitted that the blood becomes altered in composition, and that as effete matter is present in excess a burden is imposed upon the eliminating organs for its removal. The developing fetus contributes its quota of waste material to the maternal blood also and should, through any cause, an important emunctory fail to accomplish its proper amount of work, serious nervous derangements are liable to arise. Pinard and Bouffe de Sainte Blaise have drawn attention to the important part played by the liver and kidneys in auto-intoxication. The liver is the organ through which most of the ab-

sorbed digested products are filtered and, sentinel like, it refuses passage to some of these substances and, if off its guard, some of them slip through that ought not. With diminished anti-toxic function of the liver the urine becomes less toxic because the irritated kidneys loose a portion of their permeability and toxemia is developed. Foulkrod (5) believes that 50% of pregnant women suffer from some form of intestinal disturbance, and it is certainly true that intestinal disturbances are concomitant with, or preliminary, or subsequent to most toxemias. When instances occur which are positively demonstrable of serious toxemias being caused by prolonged constipation, it is certainly logical to presume that constipation even in a mild form is provocative of the absorption of toxins that should have been eliminated by the intestines; these toxins seriously impair the perfect activity of the liver, to which they first go, through the portal circulation. If the liver is so continuously irritated it cannot well do its work, more or less toxins or irritants to metabolism soon get through this filter into the systemic blood and cause nervous, circulatory, and kidney irritation. Such irritations at first, and perhaps continuously, may be inconsequential, but they may be the forerunners or the instigators of serious conditions in the latter part of the pregnancy. A primary axiom in pregnancy, then, should be that constipation must not be allowed, and such means must be inaugurated and persisted in as will prevent constipation, intestinal stasis, intestinal fermentation, putrefaction and the absorption of toxins.

It is now acknowledged, both physiologically and clinically, that the thyroid gland normally hypersecretes during pregnancy. This is doubtless necessary to neutralize the nitrogenous poisons that occur from the double metabolism of mother and child. If the thyroid does not secrete properly, various toxemias occur. A malsecreting thyroid can probably allow pernicious vomiting to occur during pregnancy, can certainly interfere with the nutrition of the fetus, can interfere with the health of the mother, and can allow puerperal eclampsia."

It is therefore of great importance, if the thyroid gland is not properly secreting, to administer thyroid substance.

Though the pathogenesis of eclampsia is still unsettled, it belongs solely and absolutely to the puerperal state. It is not apoplectic, epileptic, or hysterical in character. It depends upon toxemia due to absorption and over production of toxins and under elimination by the emunctories. These toxins have their origin, most probably, in the ingesta, in intestinal putrefaction and

fermentation, in foetal metabolism, in diminished thyroid secretion one or all, and their is coexisting sluggishness, impairment, or suspension of elimination. If the etiology of eclampsia is still an unknown quantity, we have undoubtedly advanced a step or two in its treatment.

Treatment.—In considering the treatment of eclampsia, we have before us a subject of momentous importance and one, upon the successful carrying out of which, may depend the lives of two human beings. The subject is therefore one of absorbing interest not only to the obstetrician but to the general practitioner as well. This statement is emphasized when attention is called to the frightful mortality for mother and fetus, especially in the ante-partum variety—50% for the mother and 69% for the fetus, as against 25% for mother and fetus in the intra-partum and 7% in post-partum cases. Nor indeed will apology be necessary, when we consider that the eclamptic tendency is proportionate with the advance of pregnancy and that the maternal mortality diminishes progressively from the ante-partum to the post-partum states; that is, it is greatest when eclampsia sets in during pregnancy, is less during labor, and lowest of all when the attack occurs for the first time after labor—to insist upon the very great importance of early supervision of the pregnant woman. "When (6) obstetricians shall accustom themselves to watch their cases of pregnancy, not only for the physical signs of pronounced renal inadequacy as an index of an approaching eclamptic attack, but also for the general symptoms of the overcharging of the blood with toxic material—as high arterial tension, headache, gastric disturbances, physical and mental lassitude—and further for failure of the bowels, liver, skin, and lungs to properly perform their functions, and intelligently treat the same, then, and then only, shall they have done their whole duty by their patient and done all in their power to correct the pre-eclamptic condition and avert an impending eclampsia." If it be true that eclampsia is the result of toxemia, it requires no argument to prove that the preventive treatment of the disorder is far and away more important than the curative treatment, since the general opinion is that the seizure is preventable and the proverbial ounce of prevention is certainly worth the pound of cure. But the general practitioner will say: it is all very well for obstetricians who reside in cities to follow this advice, for their obstetrical engagements are made far ahead of the time for the expected confinement and they can exercise this supervision, but what can those who do obstetrical work in small towns, and especially in

the country, accomplish along these lines, when as a rule they are not engaged before hand and only see their patients when labor has set in? In reply I would say that it is the duty of every medical man who does, or expects to do, obstetrics to educate the heads of families as to the supreme importance of this supervision of the pregnant woman and of the great danger to her life and to the life of her unborn child should it be neglected. It is up to the all-around medical man—and country doctors are all all-around men—to do this and not wait until called hurriedly to see some poor woman in the throes of death from eclamptic seizure whose life could have been saved by timely and intelligent prophylaxis. The physician who neglects this duty is not just to himself and is most unjust to the innocent child-bearing woman. The onset of eclampsia, though sometimes sudden and unaccompanied by premonitory symptoms, rarely comes on unattended by the previous hoisting of danger signals, as heightened arterial tension, rapid pulse, diminished secretions, notably of the kidneys, œdema—local or general—gastric and intestinal disturbances, headache and general lassitude, both mental and physical. These danger signals point directly to the fact that toxic material is accumulating in the blood and warns us to be up and doing or disastrous results will follow. What are the indications? Eliminate,—eliminate,—and again eliminate; do not wait to examine the urine, that can be done later on, clear out the alimentary tract from mouth to anus; promote diuresis and diaphoresis by an exclusive milk diet and judicious bathing. The advantages of a milk diet are: 1st. It is a splendid diuretic and increases the secretory power of the kidneys and at the same time their permeability. 2nd. It is an ideal food for the general support of the body and after ingestion leaves less residue to undergo putrefactive and fermentative changes than any other. It is admitted that meat favors the production of certain toxins formed in the intestinal canal by the operation of bacteria upon food, while if Metchnikoff's theory be not wrong, micro-organisms in milk rather suspend the development of the microbes usually found in the alimentary canal. It may be that milk—especially sour or buttermilk—contains antigens which cause the formation of antibodies which are antagonistic to the operations of these microbes. Therefore cut out all carbohydrates and proteids—which cause fermentation and putrefaction—in fact give no nitrogenous food.

To clear out the intestinal tract—the sewer of the body—I have found nothing better than one or two large doses of calo-

mel, to be followed by a colonic douche of normal saline solution or solution of sulphate of magnesia. The saline should be used in liberal quantities, as it not only flushes the colon but largely increases the action of the kidneys, thereby promoting elimination. Do not give much medicine and choose those that you do administer with careful judgment, for it is well to remember that the kidney is as impermeable for therapeutic poisons as for natural poisons, and the employment of toxic remedies oftentimes has no other effect than to bring about an association of medicinal intoxication with the eclamptic. The administration of intestinal antiseptics has served a good purpose, and I especially like guaiacol carbonate; it does not irritate the gastrointestinal mucous membrane; it passes through the stomach unchanged; is a good deodorizer and sterilizer of the intestinal contents, (in typhoid fever it has no equal) it may be given in three to fifteen gr. doses, every three or four hours. If improvement does not follow from this treatment then there remains to empty the uterus in the quickest, safest, and least hurtful way to mother and child. "*Cito, tuto, jucundo.*" The method to be employed will depend largely upon the conditions present. In the presence of convulsions we are confronted by a condition, not a theory. Here we are governed by no hard and fast rules, for each and every case is a law unto itself, but each case issues a three-fold command—control the convulsions, empty the womb and eliminate the toxins. With skilled assistance—a brother physician, or a well trained nurse, or better, both—all three of these procedures can be undertaken at the same time. The picture is one which urges to action. The danger is imminent and admits of no delay. For immediate control of the convulsive seizures and as an adjunct to other treatment chloroform is "*facile princeps.*" It should be administered with the same care and caution which governs its exhibition in the production of surgical anesthesia, and *only during the convulsions* unless efforts are being made to dilate the cervical canal, or during other operative obstetric procedures. Next in importance come veratrum and chloral, in the order named, venesection and nitroglycerin—normal salt and saturated solution of magnesia sulphate. Ordinarily the initial dose of veratrum should be at least 10 or 15 drops hypodermically and repeated within an hour unless powerful sedation is obtained and the pulse brought down to 60 or less to the minute. After labor is completed and the convulsions under control it should be given in 3 to 5 drop doses often enough to

hold the pulse down to 60 for two or three days.

According to Wood, the method by which veratrum is supposed to do good in cases of eclampsia is a double one. Chiefly from the action of its alkaloid, jervine, it powerfully depresses the circulation and so bleeds the woman into her own vessels, relieving by this means congestion of the cerebral and spinal vessels, reducing in all probability any spasm of the renal blood vessels which may be present, thereby causing marked increase in the flow of urine. In addition to this action, jervine also acts as a powerful sedative to the motor tracts of the spinal cord, and so directly quiets nervous excitation, while the copious sweating which often follows its administration aids in relieving the blood of impurities, the kidneys of congestion and relaxes the peripheral blood vessels. In addition to this it reduces the temperature: it relaxes and renders more yielding the rigidity of the cervical rings and thereby lessens, or removes, perhaps the greatest obstacle to quick delivery. It should not be forgotten that convulsions rarely, if ever, recur with a pulse of 60 or less. Veratrum should be given boldly but guardedly, alcoholic stimulation—whiskey or brandy—is an almost certain antidote. To be effective chloral must be given in large doses. Thirty to sixty grains should be given by enema and one need not hesitate to exhibit as much as three drams in twenty-four hours, or even more, in bad cases. Charpentier prefers it above all other remedies and Winckel recommends it most highly and by its use claims to have saved 85 out of 92 cases.

In those cases where there is a sledge-hammer pulse, high arterial tension, plethora, cyanosis and stertorous breathing, and especially if pulmonary oedema be threatened, I believe that venesection is a *sine qua non*. Bouchard (7) says, that "in removing 32 grams of blood you remove from it—the circulation—50 centigrams of extractive substances; the daily elimination by urine is 8 grams; you therefore in this way remove one-sixteenth of the extractive substances which the urine ought to carry away. This result is not insignificant; for the kidneys ought to remove in one hour these 50 centigrams of extractives, and if the convulsions or comatose accidents resulting from the non-elimination can kill the patient during this hour, the bleeding which you induce may save the life of the patient by removing for the moment from her the excess of toxic material which causes the development of the fatal accidents." In any case it is certain that we remove from the economy more toxins by bleeding than by any other channel, the renal tract

excepted, for a bleeding of 32 grams removes from it as much as 280 grams of a liquid diarrhea or as 1000 litres of perspiration. Venesection may be carried to the point of tolerance when followed by the subcutaneous injection of hot normal salt solution. The bleeding need not be confined to the plethoric with full and bounding pulse, but even a weak pulse and profound coma do not contra-indicate its use, for the rapid introduction of the warm salt solution, following, counteracts the effects of bleeding, filling the vessels and stimulating the heart. From a pint to a quart of blood can be safely withdrawn from the veins of a patient of average weight, provided the injection of the salt solution is followed up at once.

Undoubtedly where the pulse of tension exists venesection is called for, and should be done in time and not, as recommended from some sources, only when symptoms of pulmonary oedema appear; the procedure is preventive of pulmonary oedema but not curative. In these cases, therefore, it seems to me obligatory to practice bleeding, not only because it is theoretically legitimate, but because it has been shown to be useful. Nitroglycerin is useful in relieving cephalalgia, but it must be given in large doses, one-sixteenth to one-tenth grains hypodermically; it also relieves arterial tension and is said to prevent pulmonary oedema. The use of narcotics, first introduced by Veit, is discountenanced by Bumm (8). While it is an easy method of treatment, it is dangerous because it masks the symptoms of the condition. The circulation and respiration, two functions whose regular action are all important, are depressed. Narcotics do not influence the pathologic processes in the least, and to rely upon them is to do nothing. Morphine is no antidote to the poisoning, and if it accumulates in the system the condition is made worse. I am aware that morphia is the mainstay of the general practitioner in the treatment of eclampsia, but when one remembers how much depends upon elimination, and how antagonistic morphia is to elimination, one may well be doubtful in regard to its employment. Lumbar puncture, as advocated by Kronig for the relief of intracranial pressure and the consequent increase of cerebrospinal fluid, is a measure of such doubtful utility that I shall merely mention it, especially as Henkel, in 1904, damned it with faint praise, and Mirto, in 1905, demonstrated that eclamptic convulsions are not caused by intra-spinal or intra-cerebral pressure, moreover, it is a procedure that cannot be undertaken by the average physician at the bedside. It may also be said that lumbar anesthesia in eclampsia is without benefit. Decapsulation of the kidney,

as advocated by Edebohls, to stimulate the circulation of the organ is of doubtful value. It is difficult to choose the proper time for the operation. One is unwilling to operate too early, and if necrosis of the kidney substance has set in the treatment is useless. I am not an advocate of the use of hot packs, or hot air, for though by their means profuse perspiration may be induced the amount of toxins removed in this manner is, comparatively, so small, that bleeding seems infinitely better. Bumm (9) has never seen a single severe case improved by sweating. On the other hand coma has frequently appeared. Prolonged sweating causes a concentration of toxins in the fluid and tissues of the body, and the increased irritability of the nervous system may provoke spasms. Pilocarpine has been discarded because of danger of pulmonary oedema, and its depressing effect upon the heart. Oxygen is said to aid materially, especially in post-eclamptic stupor, both as an eliminant and stimulant.

It is of first importance to preserve respiratory and circulatory activity. As soon as coma appears respiration slows down, becomes superficial, and more and more mucus, blood, and secretion collects in the trachea and pharynx. This material gradually invades the bronchi and lays the foundation of aspiration pneumonia. Many women apparently relieved of their eclampsia die of pneumonia. In deep coma, in addition to the inhalation of oxygen, it is necessary to free the mouth and throat of all mucus, slime and blood and to resort to artificial respiration when breathing becomes shallow. Many women practically moribund have been saved by this treatment. If in spite of any or all of these eliminative measures the toxemia increases the best outlook for the mother and child is given by rapid delivery.

Comparison of statistics of operators who employ the expectant treatment and those who terminate labor immediately are distinctly in favor of the latter treatment. The problem then is merely the method and technic of rapid delivery. If the maternal soft parts are prepared for delivery forceps or version and extraction are indicated. If the symptoms do not demand immediate and rapid delivery, and if labor pains have not begun, there are several modes of procedure which one may adopt; the introduction of a uterine sound, passing it just sufficiently through the internal os to cause rupture of the bag of waters, will usually bring on pains; if the pains are slow in coming—and they usually are—the insertion in the cervical canal of a tent reinforced by a *gauze* tampon packed snugly behind and around the cervix will almost invari-

ably be efficacious. If the cervical canal be sufficiently patulous, a number 18 or 20 soft rubber catheter passed through it into the uterus and kept there by means of a *gauze* tamponade, is perhaps the best and safest even if it be slow. The best tampon is a two inch sterilized gauze bandage, which can be placed in position through a speculum with a dressing forceps, without danger of its becoming infected. Again, if the internal os be sufficiently dilated to admit the index finger the bi-manual method of Harris or Edgar may be resorted to, but it must be remembered that under the most favorable circumstances from a half to three-quarters of an hour, usually longer, is required to sufficiently dilate and paralyze the internal ring to admit of delivery by forceps or version with safety to the mother. Where the mother's life is in danger and the uterus has to be emptied quickly the element of only a few minutes time is of the utmost importance. A cervix that can be dilated manually in forty-five minutes may not be considered rigid, if, during such a prolonged operation neither the maternal nor the fetal life is in danger. On the other hand such a cervix is rigid for all practical purposes, if on account of danger to the mother the uterus has to be emptied in ten minutes. Such a dilemma is presented—fortunately not often—when a primipara is seized with convulsions prior to her time of expected labor, with an uneffaced cervix, rigid, and with no appreciable attempt at dilatation, the rapid evacuation of the womb is imperative.

The trend of modern opinion leans to vaginal Cæsarian section as proposed and developed independently by Dührssen and Acconci. In 1895 Dührssen brought this procedure to the notice of the profession and since has continually urged its advantages. Dührssen (10) in a paper read before the American Gynecological Society. Hot Springs, Va., May 24th, 1906, claims that by means of vaginal Cæsarian section and Gigli's hebotomy, a problem of centuries has been solved, namely, the problem of how, without danger, to deliver the mother of a living child, in the presence of obstruction, through the soft and bony parts of the generative passage, since neither of these operations has the dangers of the classical Cæsarean section, nor of symphysiotomy. Both operations can be combined in one case, as, for instance, in the case of a patient with contracted pelvis, who is attacked with eclampsia before the dilatation of the os. The simple subcutaneous hebotomy is first performed, and then the Cæsarean section. Dührssen affirms that the delivery can be terminated in five minutes by the vaginal Cæsarean section. That the dan-

ger of sepsis is practically nil, under precautions, as the operation is extra-peritoneal; that with proper technique the child is not any more endangered than by the classical method. In regard to the technique he points out as of the greatest importance the removing of obstruction on the part of a rigid and narrow vagina by means of a vagino-perineal incision, the perineum is divided down to and through the levator ani, to the extent of allowing the introduction of a man's hand into the vagina. The opening in the lower segment of the uterus must be enlarged to the same extent, and in case of full term children the necessity of splitting both the anterior and posterior walls of the uterus follows. Dührssen insists that the operation of delivering must be performed by turning, not by forceps.* "Briefly speaking, the operation of vaginal Cesarean section is the incision of anterior and posterior vaginal walls, so as to enable the anterior and posterior cervical lips to be incised in the median line up to but not beyond the anterior and posterior peritoneal reflexions." (11) "Up to now the operation has been mostly performed by experts and largely in hospital practice. In several of the recent text books on obstetrics it is distinctly stated that vaginal Cesarean section is not an operation for the general practitioner, because of his unfamiliarity with vaginal operations, the necessity of trained assistants and the impossibility of securing in private residences aseptic conditions which would insure for mother and child successful results." The same arguments in turn have been used against almost all obstetrical operative procedures, yet experience has shown that if the particular operation under discussion has a true reason for its existence, its technicalities can be acquired by the general practitioner, and that the results are uniformly good. This especially applies to those who have finished their collegiate medical education, during the past ten or fifteen years. It is beyond the limits of this paper to take up in detail the technic of vaginal Cesarean section, or to discuss all the complications of pregnancy which seriously threaten the life of the mother and may demand immediate delivery. Eclampsia has furnished and probably will always furnish the largest number of cases demanding its employment. It goes without saying, therefore, that every physician who practices obstetrics should familiarize himself with its technic and be prepared to perform the operation should occasion demand, and occasion will demand until the etiology of eclampsia is so well

understood that prophylaxis will entirely supercede operative treatment. Peterson says, and I fully agree with him, "at the present time the best authorities are agreed that given a woman with eclamptic convulsions, the sooner the uterus is emptied the better it will be for both mother and child. It is also pretty well agreed that that method is best which accomplishes its purpose with the least traumatism and shock to the patient. If these premises are accepted, there can be no further discussion as to the superiority of vaginal Cesarean section over all other methods. Almost every cervix is hard and unyielding when manual dilatation is compared with vaginal Cesarean section. I am speaking now of the cases when the obstetrician is called to patients where the convulsions antedate labor pains or start in at the beginning of labor. Later on in labor, when the cervix is softened and is half or three-quarters dilated, bi-manual dilatation is the best method, for practically there will be no resistance to the entering hand. Prior to or in the early stages of labor, it is an entirely different problem. There is less danger of sepsis in the vaginal Cesarean operation, for the field of operation can be rendered sterile and as good asepsis maintained as in any vaginal operation. Every one who has performed manual dilatation by one or both hands knows that this is not true as regards these operations, and that there is far more danger of fecal contamination during the prolonged manipulations than in the much more cleanly, more surgical operation of vaginal Cesarean section. Again, with oftentimes a patient on our hands where convulsions are only controlled by the anesthetic, the operator feels the need of haste and is apt to use more force in manual dilatation than is safe. Many patients have succumbed to the shock of extensive tears through the employment of undue force. Even if the tears are not so extensive as to pass upward to and through the peritoneum, they are much more likely to result in sepsis than are the sutured, clean-cut wounds of a vaginal Cesarean section. Dilatation by the more powerful instruments, of which the one devised by Bossi is a type, is, in my opinion, entirely unjustifiable because of the accidents which are liable to occur. Without question such an instrument will dilate the cervix. So it would a stone wall if it could be inserted between two stones. Such instruments are unscientific and should not be employed when we can accomplish the same end by means of a clean cut incision. Cervical incisions will also give place to the more scientific, simple and accurate incision of vaginal Cesarean section. Because of the time elapsing after making these incis-

*For the practice of hebotomy, see *Surgery Gynecology and Obstetrics* July, 1906—Arthur N. Bill—p. 42.

ions until the birth of the child, they cannot be said to come into competition with the latter operation when haste is required, as is certainly the case in eclamptic patients.

That vaginal Cæsarean section is looked upon with favor by operators of large experience in eclampsia is seen by the number of cases reported by individual operators. Bumm has had 37 cases and Veit 33, the latter's cases resulting in only one death, a record probably more accidental than otherwise, for a greater percentage of cases of eclampsia than one out of thirty-three are fatal from the start, no matter what kind of treatment is instituted.

I have had no experience with suprasymphiseal section as advocated by Frank and Sellheim. It seems to be a revival along the lines of laparo-elytrotomy as performed by Gaylor Thomas. It can never take the place of vaginal Cæsarean section for reasons patent to every obstetrical surgeon.

Bibliography.

- (1) Kahrs, American Medicine, January, 1909.
- (2) Virchow's, Archiv., 1895.
- (3) Muench. Med. Woch., July 9, 1907.
- (4) Auto-Intoxication in Disease.
- (5) American Journal Medical Sciences, October, 1908.
- (6) The Practice of Obstetrics, Jewett.
- (7) Loc. cit.
- (8) Deutsche Med. Woch., Nov. 21st, 1907.
- (9) Loc. cit.
- (10) Surgery Gynecology and Obstetrics, June, 1906, p. 74.
- (11) Indications for and technique of vaginal Cæsarean section—Reuben Peterson, Fort Wayne, Indiana—Surgery Gynecology and Obstetrics, Feb. 1909, p. 180.

Some Remarks on the Proper Use of Nuts as Food.*

By Geo. M. Niles, M. D., Atlanta, Ga.

Up to a comparatively recent date nuts were considered by most people either a luxury, or as tit bits to be eaten out of hand at odd times. They had no fixed standing as to food value, often being unjustly blamed for indigestion brought on by other causes.

During the last two decades, however, both from a dietetic and an economic standpoint, they are becoming more appreciated, as evidenced by their increased consumption.

With this greatly augmented demand the Southern States are much concerned, for two of the principal nuts, the peanut and

pecan, are largely Southern products.

It may surprise this Association to be informed that the total quantity of nuts imported into the United States in 1907 was 86,238,000 pounds, with a value of over \$6,000,000. From Georgia, North Carolina, Virginia and Tennessee the yield of peanuts alone was 225,000,000 pounds. The exact yield of pecans could not be obtained, but it was large; and, when the many groves, now growing in Georgia, come into bearing, the pecan crop alone will hold a respectable place among the resources of our State.

The increased cost of the various meats exacted by the packing trusts has quickened interest in the economic value of nuts, many special nut foods, such as malted nuts, nut butters, and meat substitutes, with nuts as a basis, being now on the market at reasonable prices.

Again, there is a fairly large number of our population, who, for different reasons, abstain from meat. In this connection might be mentioned the Seventh Day Adventists, a growing body in the South, whose teachings are opposed to the use of meat in any form.

I feel, therefore, that a brief survey of this somewhat neglected field will be of both interest and profit to my hearers.

The term "nut" is applied somewhat loosely to certain varieties of fruits, and implies a more or less fibrous covering surrounding a kernel or meat. They are produced in the most diverse manners, from vine-like plants, as the peanut, up to the giant pine or beech. One variety, the water chestnut, is supplied by a water plant.

To enter into a description of the many native and imported nuts available for food consumption would exceed the limits of this paper, so I shall consider only a few of the best known.

The flavor of nuts depends principally on the oils they contain, though in some there are specific flavoring agents. Some of these oily constituents easily become rancid, imparting a most disagreeable taste or odor.

The peculiar flavor of the roasted peanut is due to browned oils and starches. The pungent or bitter taste of almonds, as well as peach and plum pits, a family botanically allied, is due to a cyanic acid yielding glucosid. The chestnut, especially when roasted, has a characteristic starchy taste, betokening its main ingredient. The flavor of nuts, as well as their size can be greatly improved by judicious cultivation.

The composition of nuts has been investigated at several of the agricultural experiment stations in this country, and I wish in this connection to acknowledge valuable data furnished me by Prof. M. E. Jaffa, of

*Read before the Medical Association of Georgia at Macon, April 22, 1909.

the California Station, and Mr. Charles D. Woods of the Maine Station. some of the nuts most used, as compared

The following shows the composition of with a few of the staple food products:

KINDS OF FOOD,	Refuse	EDIBLE PORTION.						
		Water.	Protein.	Fat.	Carbohydrates.		Ash	Fuel value per lb.
					Sugar, starch, etc.	Crude fiber		
	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Calories
Brazil nut.....	49.35	4.7	17.4	65.0	5.7	3.9	3.3	3.120
Chestnut.....	23.40	6.1	7.8	8.8	70.1	2.9	2.4	1.840
Cocoanut.....	34.66	13.0	6.6	56.2	13.7	8.9	1.8	2.840
Hickorynut.....	62.20	3.7	15.4	67.4	11.4	2.1	2.2	3.345
Peanut.....	27.04	7.4	29.8	43.5	14.7	2.4	2.2	2.610
Pecan.....	50.10	3.4	12.1	70.7	8.5	3.7	1.3	3.500
Walnut.....	58.80	3.4	18.2	60.7	13.7	2.3	1.7	3.075
Beefsteak (round).....		65.5	19.8	13.6			1.1	.950
Cheese.....		27.4	27.7	36.8	4.1		3.7	2.145
Eggs, boiled.....	11.20	65.0	12.4	10.7			.7	.680
Whitebread.....		35.3	9.2	1.3	55.2	.5	1.1	1.215
Beans, dried.....		12.6	22.5	1.8	55.6	4.4	3.5	1.605
Potatoes.....	20.0	78.3	2.2	.1	18.0	.1	1.0	.385

You will observe from this comparison that nuts, even the starchy chestnuts, furnish much more fuel value per pound than either beef, eggs or cheese.

They are rich in protein and fat, containing some starch and but little water. The pecan is the richest in fat, though the Brazil nut, hickorynut and walnut are not far behind. In protein the peanut easily leads, containing 29.8 per cent. per pound, while round steak contains only 19.8 per cent. The chestnut has much the largest carbohydrate content, 73 per cent., though the peanut shows nearly 18 per cent.

Nuts are also well supplied with mineral matter. The ash of the walnut, almond, etc., is rich in phosphoric acid, comparing favorably with some of the cereals.

As to the digestibility of nuts, I am free to admit that they are in some disrepute. The cause of this, however, is mainly due either to insufficient mastication, to crowding the stomach with them after a hearty meal, or to eating them at unseasonable hours.

When they are accorded a proper place in the dietary, doubtless they will soon overcome this disfavor.

Prof. Jaffa reports on a number of investigations carried on with a fruit and nut diet, some on vegetarians, some on fruitarians, and some on subjects who had previously lived on an ordinary mixed regime. The general results as to the co-efficients of digestibility of nuts showed protein 90 per cent., fat 95 per cent., and carbohydrates 97 per cent.

As most of the experiments recorded at

the California and Maine experiment stations comprised some nuts not in general use in the Southern States, I desired to form an intelligent opinion as to the digestibility and economic value of the pecan, the peanut and the Brazil nut, these three being the ones most in favor with us.

For this purpose I enlisted the aid of Messrs. J. I. Matthews, J. G. Devane, W. L. Morris, G. D. Thompson, S. A. Kirkland and E. S. Deaver, all these being students at the Atlanta School of Medicine.

These young men voluntarily offered their co-operation, and deserve much credit for the painstaking manner in which they followed my directions.

They were allowed a sufficiency of carbohydrates, as bread and fruit, but took no meat, eggs, butter, peas or beans. Their digestive functions, which were tested before going on this diet, were found to be normal. Each day they were weighed, their general condition was noted, and their urine and feces carefully examined.

This diet was kept up four days with five of them, and three days with Deaver, this young man becoming somewhat upset and nauseated at the end of that time. He discontinued the nuts by my direction, though entirely willing to go on with them.

The following table will give only the main findings, as an elaboration of all the figures for each man each day would be tedious:

Name.	Nuts.	No. Days.	Pounds used.	Weight at start.	Weight at finish.	Cost	Remarks.
Devane.....	Pecan	4	3 3-4	140.5 oz.	141.10 oz	75 c.	Normal condition.
Morris.....	Pecan	4	4	159.11	159.6	80 c.	Normal condition.
Thompson....	Brazil	4	4 1-4	140.1	140.6	85 c.	Normal condition.
Deaver.....	Brazil	3	3 3-4	168.5	168.0	55 c.	Somewhat nauseated.
Kirkland.....	Peanuts	4	4	135.6	133.14	80 c.	Normal condition.
Matthews.....	Peanuts	4	3 3-4	160.8	262.4	75 c.	Normal condition.

It will be noted that two gained in weight; that three remained about the same, there being a loss of a few ounces; while only one lost weight appreciably, that being only one and a half pounds. That the calories furnished were sufficient showed in their feeling of strength and buoyancy. They had no disturbance of either stomach or intestinal function, with the slight exception mentioned.

The co-efficients of digestibility, as shown by the feces, were protein 95 per cent., fat 90 per cent, sugar, starch, etc. 93 per cent.

During each day of the experiment these young men seemed "fit" in every way; and when the cost of these results, bearing in mind the amount of heat and energy produced, is compared with the cost of a given amount of meat necessary to generate the same heat and energy, it is enough to make a thoughtful observer sit up and take notice.

As has been shown by the foregoing, as well as proved by other observers, the rich content of protein and fat in nuts can be excellently assimilated, but their place in the diet, like that of any other concentrated food, should be carefully regulated.

Any diet, to be normally propelled through the digestive canal, should possess a certain bulkiness; and for this reason nuts can be best used along with foods containing a large proportion of cellulose, such as fruits, vegetables, breads, crackers, etc.

Always remember that they should constitute an integral part of the menu, and not be superimposed on an already sufficient meal.

It is told of a Georgia merchant that, on a recent trip to New York, he was dined and wine at frequent intervals during the day and night by some of his commercial friends. Under the seductive influence of tempting viands, good fellowship and sundry mixed drinks, he taxed his stomach to a wonderful degree, and just before retiring he partook of a small bunch of grapes. In a few hours the pains of an outraged digestive apparatus forced him to call in a phy-

sician, whom he gravely informed that some grapes, eaten the night before, seemed to actually poison him.

The moral is obvious.

The thorough mastication of nuts is also essential, the co-efficient of digestability being increased, and the liability to discomfort being decreased by care in this particular.

The popular belief that salt added to nuts improves their digestibility is not borne out by investigation, though, to many persons, salt renders them more palatable.

The limits of this paper will not permit me to enter into details regarding the specific uses of different nuts and nut preparations in varying conditions of human need.

Their nutritious qualities have been taken advantage of by numerous institutions and individuals in the building up of wasted and impoverished tissues; their charming flavors have enabled the confectioners to utilize nuts in many of the delicious sweetmeats so alluring to the maiden's heart; while the housewife and caterer have found them invaluable in the preparation of countless dainty dishes.

Let me, in conclusion, stress the fact that the vegetable proteids are free from many of the toxins with which the flesh foods abound, and that they less readily undergo putrefactive changes in the intestine. Moreover some of the purest and most readily digestible forms of fat are these derived from nuts, being provided as nut oils, or in the emulsified forms as nut butters.

People vary in their food requirements, as do stoves, furnaces, or locomotives in their fuel requirements; and, in our efforts to scientifically furnish the requisite calories, we should endeavor to increase the endurance and efficiency of the body, as well as relieve morbid states of nutrition.

Permit me, therefore, to commend to you the study of nuts and their food value, believing this subject entirely worthy of your sober consideration.

409-10 Candler Building.

What is Chronic Rheumatism? *

By Benj. K. Hays, M. D., Oxford, N. C.

Within the memory of men who have not yet reached the half century mark it was customary to call almost every pain which afflicted joint or muscle "rheumatism." Rapid advances in our knowledge of pathology have taught us that these cases of myalgia and arthralgia are due to a variety of causes, and that rheumatism, as an etiological factor, is probably the exception rather than the rule. A number of such cases having recently fallen into my hands caused me to review the literature on the subject, and such points as impressed me I have written down, not with the view of producing a learned or highly scientific paper, but in the hope that the results of my research may be of interest to others as well as to myself. At the 1906 meeting of the American Medical Association, there was contributed a symposium on rheumatism, and from these papers, published in the *Journal* under date of Feb. 2d, 1907, I have obtained most of the data from which my paper is composed.

RHEUMATIC FEVER.

It is the consensus of opinion of medical men at the present time that rheumatic fever is an infectious disease; that it is due to a micrococcus, and that this micrococcus usually finds access to the body by way of the tonsils. But whether there is a specific micro-organism which causes the disease, — the so-called *micrococcus rheumaticus*, — or whether it is due to a streptococcus or to a group of pyogenic germs is still a mooted point. In other words it has been seriously questioned whether there is a specific disease which should be called *rheumatic fever* or whether the symptoms are a local manifestation of a general septic infection. The weight of authority seems to be with the former view.

Whatever the cause of rheumatic fever its tendency is to spontaneous recovery. It is exceedingly rare for this disease to be followed by the chronic form, and when we remember that certain chronic affections, such as arthritis deformans, are similar to rheumatic fever in their acute manifestations, it becomes highly probable that the chronic trouble is not a sequence of the acute but is attributed to it by an error in diagnosis in the first instance. I think, therefore, that in our study of chronic rheumatism we may safely eliminate rheumatic fever as an etiological factor,

CHRONIC RHEUMATISM.**A. Of Tendon.**

Contractures of isolated tendons, without joint involvement, causing flexion of a finger or limb, are probably due in the majority of instances to an injury resulting in an adhesion between the tendon and its sheath. It is, therefore, an error to speak of this condition as rheumatism. Tenosynovitis may be gonorrheal, syphilitic or tubercular. All of these conditions should be excluded before making a diagnosis of rheumatism.

B. Of Muscles.

If there be such a disease as chronic muscular rheumatism its etiology is unknown. There are other conditions which should be considered in making the diagnosis.

(1) Neuralgia.

"It is probable," says Allen Starr, "that neuralgia has in every chronic case some organic lesion." In other words it is a neuritis, and it would seem that many a so-called case of muscular rheumatism is in reality a neuritis. Nor is there any reason why the acute neuralgias, which, according to the same authority, are due to malnutrition, should not manifest themselves in other nerves than in those in which we look for them. Intercostal neuralgia and intercostal rheumatism are described as separate affections, but I have never been able to learn how a differential diagnosis is made.

(2) Auto-genetic Intoxication.

This is probably the most frequent cause of myalgia. It may be endogenous or exogenous. That is, it may be due to faulty metabolism on the part of the muscular tissue, in which there is defective elimination of the toxins generated in situ, or there may be a deposit in the muscles of toxins generated in the intestinal tract. The latter are thought to be the products of nitrogenous decomposition, and have played an important part in the literature on uric acid with which the medical profession has been flooded. We have been taught by the physiological chemists that uric acid is not the chief toxic agent in the product of nitrogenous decomposition, but on the contrary it is the least toxic, and that the term "uric acid diathesis" has no meaning. There is, however, a series of nitrogenous decomposition products, spoken of the purin bodies, and these collectively are believed in many instances to be highly toxic.

Metchnikoff, in his "Prolongation of Life," contends that the toxins from the flora of the large intestine are carried through the circulation and deposited in the various tissues of the body,

* Read before recent meeting of Tri-State Medical Society, Charleston, S. C., Feb. 16-17.

and are responsible for most of the ills to which flesh is heir.

(3) Syphilis.

This disease may cause not only muscular pains, but contractures of the muscles. It should also be remembered that muscle tissue may be tubercular, and that it may be the seat of a secondary septic infection.

(4) Senility.

In connection with muscular pains we must consider the pathogenic changes due to old age. If it be true that senility consists chiefly in the encroachment of the connective tissue upon the functioning cells, it is but natural that age should lessen the resistance of joint and muscle, not only to atmospheric changes, but to all manner of toxins.

To recapitulate, it is probable that most cases of so-called muscular rheumatism are due, where trauma, neoplasms and secondary infections have been eliminated, to neuritis, to autogenetic intoxication, syphilis, tuberculosis or senile degeneration.

B. The Joint Type.

To physicians practicing in small towns and in the country a differential diagnosis in the various forms of chronic arthritis is most difficult, since the use of the x-ray is now regarded almost as a *sine qua non*. And yet, as it is into the hands of the country doctor that most of these cases primarily fall, and as an early diagnosis is of the greatest importance, affecting as it does both prognosis and treatment, the most careful study of each case should be made. Under no circumstances should we dismiss a case as one of chronic rheumatism until other well known and not infrequent diseases have been eliminated.

The classification of Goldthwaite is now generally accepted by American surgeons, and is as follows: (1) Chronic Villus arthritis; (2) atrophic arthritis; (3) hypertrophic arthritis; (4) infectious arthritis; and (5) chronic gout.

I am not sure that any of us would use this classification clinically; certainly not in the absence of a pathological laboratory where the infectious might be distinguished from the non-infectious form; and in the absence of an x-ray apparatus by which alone the atrophic could be differentiated from the hypertrophic form.

When called upon to inspect an inflamed joint we should remember that by far the most frequent cause of this condition is tuberculosis. This would seem a truism too trite to be mentioned were it not for the well established fact that tubercular joints are frequently mistaken for rheumatism. I well remember the lectures of Hunter McGuire on this subject. In enumerating the points of diagnosis he laid stress upon this,

that the patient had invariably been sent to him with a diagnosis of rheumatism. Could American surgeons at the present time be polled I believe the report would show that most of the cases of tubercular joints referred to them had either been incorrectly diagnosed or had been diagnosed too late to affect a perfect cure. The frequency of this disease, its insidiousness, its proneness to follow trauma or to appear while the patient is emaciated from other causes, should make us ever watchful lest it escape our detection.

SEPTIC INFECTIONS.

Of these the most frequent is gonorrheal arthritis. Like the tubercular arthritis, it is usually mono-articular. A history of Gonorrhea usually serves to make the diagnosis clear. But such a history may be extremely difficult to obtain, the patient himself—or more frequently herself—being ignorant of the fact that she has suffered from gonorrhea. The gynecologist tells us that unsuspected gonorrhea in young married women is a most prolific cause of uterine tubal and ovarian troubles. In this class of patients suffering from arthritis the possibility of a gonorrheal infection should always be considered. Moreover we should remember that the vulvovaginitis of little girls, the gonorrheal ophthalmia of infants and the simple passage of a sound may serve to cause this disease.

Pyæmia, septicæmia and the acute infective diseases are often complicated by or followed by a septic arthritis. I have recently seen two cases, one complicating pneumonia and the other following typhoid fever, and in both the usual diagnosis of rheumatism had been made.

The prevalence of la grippe in this country, and the carelessness of its after treatment by both physicians and patient (the patient too often assuming the care of his own case) makes it a not infrequent cause of a secondary infection of the joints.

ARTHRITIS DEFORMENS.

This is not a rare disease. Its cause is unknown. From its incipency it is a separate and distinct disease from rheumatism, yet it is almost never diagnosed until it has reached an advanced stage, having previously been mistaken for chronic articular rheumatism. It is differentiated by its greater persistence, by the pain continuing in the first joint attacked after other joints have become involved, by the rapid pulse, the absence of profuse sweats of rheumatic fever, by the absence of cardiac complications, and by the failure of the salicylates to afford relief. This disease usually, though not always, involves the smaller joints first, and is more frequent in women,

especially in those who have suffered with uterine diseases.

While it may be well to bear these points of differential diagnosis in mind, and while we should never lose sight of the possibility that we may be dealing with an arthritis deformans, we may take courage by the fact that Osler freely confesses having failed to diagnose his cases in their incipency.

Hoffa of Berlin, describes two diseases, one affecting the bones and cartilages which he calls arthritis deformans, while the diseased process in the synovial membrane he calls "primary chronic progressive polyarthritis." Other writers describe a third process in which there is progressive ankylosis of the spine as "spondylitis deformans." Osler believes that all of these conditions are one and the same disease, though he calls attention to the fact that in some cases the bones, in other the cartilages, while in others the synovial membrane is chiefly involved.

GOUT.

According to Herrick of Chicago, gout is much more common in this country than is commonly supposed; it is not confined to high livers who lead a sedentary life, and its manifestations are not confined to the big toe. He insists that gout should be considered in all cases of atypical arthritis, and that the urinary and cardiovascular changes be most carefully studied, and the patient scrutinized for tophi.

NERVOUS DISEASES.

In the symposium above referred to Barker discusses "Joint Affections in Nervous Diseases," and points out that an arthritis may be due to hysteria, to tabes dorsalis, to syringomyelia and to a rare disease called "hydrops articuli intermitiens."

Finally we should eliminate traumas, neoplasms and syphilis.

CONCLUSIONS.

Given a case of chronic arthritis, and having eliminated all of the foregoing conditions, we may still be confronted by a very common group of symptoms as yet unaccounted for. These, for the want of a better name, we may call "chronic rheumatism," but we should remember that in doing so we are making a confession of ignorance.

The swollen and painful joints of elderly people who are much exposed to damp and cold and who have been poorly nourished, constitute a condition still described by this name in the text books, but even here the term is used as a cloak of concealment rather than to describe a definite pathologic change.

Chloroform and Ether from the Medico-Legal Standpoint.*

By Virginius Harrison, M. D., Prof. Materia Medica and Therapeutics; University College of Medicine; Physician to the Virginia Hospital; Medical Director to the Virginia Methodist Conference Orphanage.

Some physicians seem to have forgotten their early lessons on the physiological action of chloroform and ether. In discussing a recent trial in a Virginia city I was greatly impressed by the lack of familiarity with the dangers the physicians were assuming for themselves, when administering either of the common anesthetics to a female, without there being a third person present. The object of this paper is to refresh the memories of physicians and dentists, rather than to add to an already well written subject.

For many years it has been well known that ether and chloroform administered as anesthetics, were capable of producing in the female a sensation which they converted into the sexual act. So firm is the impression made upon them that some liberty has been taken with their person and that a criminal assault has been made, the presence of their parents and the testimony of other responsible persons who were present during the whole time of the administration of the anesthetic, could not convince them that it was merely a delusion. If this is true when there is sufficient evidence to disprove the impressions made, we can readily see how hard it would be to disprove the statements of a woman if we had no one present to aid us. One case is recorded where a woman went to have a tooth drawn and took her minister's wife with her, she claimed that while she was under the anesthetic the dentist criminally assaulted her and that the minister's wife assisted him by holding her.

In most of the cases that have been brought to trial the crime has been charged against dentists, the reason for this is no doubt due to the fact the dentist can *in a way* administer the anesthetic, draw the tooth and watch the patient at the same time, therefore has no assistant as a rule, while on the other hand the surgeon does his work in a hospital with trained nurses and resident physicians present at the operation. In the case of the surgeon if a charge is made he has a sufficient number of witnesses who were present to hush up the charge, if not disprove it to the patient, therefore the surgeon does not as often, if at all have to defend himself in court.

Quite a large number of dentists have been charged with criminal assault by their female patients; some have been arrested and put in jail without bail, and had to

spend large sums of money to prove to a jury that they were not guilty. Others have been murdered by some male relative of the patient, without giving the dentist any time to explain that the charge was not true. In the case which occurred in Roanoke, Va., in 1908 a dentist was charged by a female patient with attempted assault, the dentist was roughly dealt with by male relatives and then a charge against him in the court was made. All this was done on the testimony of the patient. No one ever questioned but that the patient was honest in her belief. In this case no witness of importance was present to disprove the charge made by the patient, and had it not been for efficient council and the expert testimony of many eminent physicians who were fully cognizant of the fact that such cases had been reported where there had been no possibility of a criminal assault, the verdict might not have been one of acquittal. Even in this case the entire community did not agree with the jury on this point, for from reports circulated it is alleged that the dentist was waited on by a committee and asked to leave the city. I have no doubt but that this dentist was cleared because it was proven that such charges are made as I have said before when there was no opportunity for such assault. It did not say that the patient had wilfully made a false charge against the dentist, for the conditions for an assault were present, and the female's testimony was no doubt an honest belief on her part, and so taken.

The number of these recorded cases are sufficient and the unfortunate advertisement of both patient and doctor is serious enough for us to take the proper precautions when administering an anesthetic to a female patient to protect our reputations. This can only be done by having a third party present; this party should be one whose influence in the community would be of value if a charge of criminal assault is made. We should further acquaint the legal profession that it is not unusual for females to have such impressions made upon them while under the influence of anesthetic. In no case have I seen that the patient's character was questioned at all, so we must not rely upon our own influence in the community nor upon the standing of the patient to acquit us. If only two people are present and such a charge is made one or the other is in serious error; the doctor to take advantage of a woman under such conditions would be getting off too lightly to meet death in an electric chair, while for a woman to knowingly make a false charge of this kind against a professional man would deserve a fate I

am not able to describe. We realize the danger, the remedy is easy, have a third person present and thereby run no risk. It looks to me like some jury might construe these facts in this manner, and say we knew how to protect ourselves and did not do it, therefore we were guilty of negligence, if we were not criminally involved.

There are four stages of anesthesia; the first is merely an intoxication from which the patient is easily aroused to consciousness, by any external disturbance or even the discontinuance of the anesthetic. In the second stage there is complete loss of consciousness but the nervous system is stimulated and sensation and muscular activity are often very manifest. In the third stage all sensations, muscular activity and consciousness are abolished. This is the stage for surgical operations and by the way the only stage in which any operation, no matter how slight, should be performed.

The fourth stage is the acute poisoning or dangerous narcosis. In this stage the patient's life is in jeopardy and will require active treatment to save it.

In the first stage if an attempt at assault is made the patient will be awakened and can freely defend herself! In the second stage we have unconsciousness, but sensation is still present and according to most authorities this is the stage in which the delusions occur. In this stage we have unconsciousness therefore the patient can not know what occurred. I said above that in this stage we often had marked muscular activity, often much struggling, as it would not be probable that an assault could be successfully made in this stage of anesthesia. In the third stage that is usually spoken of as surgical anesthesia it is possible to make and accomplish an assault but the patient would never know it as there is complete loss of sensation and consciousness.

From these statements it is very evident there is only one stage that a woman could testify that an assault was made and that was in the first stage. In this stage for the assault to be successful she would incriminate herself, as she could easily defend herself against it. What I have said has passed from the stage of interesting reading to a matter of great moment, and for the past ten years I have always devoted one lecture a year in trying to impress my students with its gravity and importance, to insist upon it that they do not take the risk of having such charges made against them, for even if one is cleared of guilt, his reputation is damaged, to say nothing of the loss of time and money used to reach this result.

Very interesting stories appear in the newspapers concerning the administration of anesthetics for the purpose of committing robbery and rape. The object of these stories are either to fill the paper with something exciting or to cover crime nearer home than that done by an outside robber. When we recall the struggling of a patient who has consented to be operated upon, we can readily understand how improbable it would be for a robber or one who wishes to commit rape, to find conditions favorable, to transfer a person from a natural sleep to an artificial one, and still harder if the person to be robbed is not asleep.

It is possible to make the transfer from a natural sleep to an artificial sleep, but it requires that all the conditions to be favorable, and these conditions are numerous, it still further requires that the robber be an expert anesthetizer, therefore these cases are of importance to disprove them. The most unique case I ever heard of was that the robbers squirted the chloroform from an atomizer through the keyhole and anesthetized the persons who were in bed.

In conclusion I wish to sound a note of warning concerning one phase of the use of anesthetics which may in the future become important from a legal standpoint. This is in regard to the anesthetizer. Are the surgeons as careful as they should be in selecting the person to fill this most important position? Why may we not hear of some surgeon being sued for allowing some one to give an anesthetic who was not proficient in this work?

The life of the patient is in the hands of the anesthetizer as much as he is that of the surgeon and often the danger of the anesthetic is the only danger of the operation. Are not the patients who choose a surgeon entitled to a man equally skilled to give the anesthetic as they believe the surgeon is, to do his work?

The selection is often made not from capability of the man but from his willingness to render this service. It is more often determined in hospitals by selecting one of the internes to this work. Where all internes come in at the same time, men are selected who have had no experience and are given this great responsibility, and by the time they know how to administer the anesthetics their time has expired and new inexperienced men must learn. I consider this an injustice to the patient, be the patient a clinic, charity patient or one who is able to pay for an expert. An anesthetizer should be well trained before he is allowed to have control of such dangerous drugs; he should be capable of recognizing the first indication of any untoward action of

the anesthetic he is using and know how to treat it.

In every city one or more physicians should make a special study of the administration of anesthetics. He should be so well posted in his specialty that he should have all the responsibility of determining which anesthetic is to be used, as some patients require one anesthetic and others will require another anesthetic. He should be in absolute control of the patient except the surgical work until the patient is put back to bed.

I make a plea for a specialty of *paid, expert anesthetizers*, who will stick to their specialty and let all other work alone. This can only be possible when the surgeon will prepare a place for him. All pay patients should pay a fee of from five to twenty dollars, according to the time consumed and the gravity of the operation. This can be arranged by the hospital and collected by the hospital and paid to the anesthetizer, just as the hospital collects for supplies and board. The anesthetist under these conditions should give his service gratuitously to the hospital or surgeon making the place for him when the patient to be operated on is one who pays the surgeon no fee. If this specialty is utilized I believe lives will be saved and anesthetics will be considered less dangerous.

2706 E. Grace St.

Adenoid Growths in the Naso-Pharynx.*

By Dr C. J. Oliveros, Columbia, S. C.

With an experience of more than sixteen years on head troubles, I feel it may prove interesting to the medical profession to give my views on the subject of Adenoids, relative to the naso-pharynx, which also concern the practitioner, by whom it is too frequently overlooked, or neglected. These growths lead to complications with ear trouble by affecting the otic ganglion. This ganglion is described as being small, oval-shaped, flattened, and of reddish gray color, located immediately below the foramen ovale, on the inner surface of the inferior maxillary nerve, and around the origin of the internal pterygoid nerve. Externally, it is in relation with the trunk of of the inferior maxillary nerve at the point where the motor root joins the sensory portion; internally, with the cartilaginous part of the eustachian tube, and the origin of the tensor palati muscle; behind it is the middle meningeal artery. In examining for these growths, at times it is necessary to make repeated examinations,

*Read before recent meeting of Tri-State Medical Association, Charleston, S. C.

where patients gag easily; but, with precaution in such cases, by using the "00" rhinoscopic mirror, all parts can be seen. I use as large a mirror as case will permit, without having him throw his saliva in my face. Where I find an elongated uvula, my first advice is to have it treated a few days, using thereon virgin turpentine, with cotton mop, every 3 or 4 hours. If uvula is very much enlarged, then I advise clipping it off to normal length and using the above turpentine mop solution for a week or ten day, when the case must report to me in person.

You will most usually find in cases of Adenoid growths, the uvula is relaxed to more or less extent. When the patient's disposition is to gag, try having him close his eyes and breathe freely through his nose while his tongue is pressed firmly forward, using a wide tongue depressor. I have found advantage in letting adult patients hold the tongue depressor, after I place it in position, and in some cases use their own fingers as a substitute for the depressor.

Local anesthetics should not be used for examinations, except in extreme cases, as they constrict the membranes and cause faulty impressions to the examiner. It is being much more than ever before appreciated, the great value of discovering and removing these obstructive growths, which if allowed to remain, are so apt to produce even systematic disturbance. Adenoid growths, when not removed, pass through much the same atrophic evolution as does the faucial tonsil in its change from hypertrophy to submersion. In its destruction by nature's process, there follows a sort of flattening out, whereby the normal concavity of the vault of the pharynx is so filled that it presents a flattened, or plane surface, instead of the normal curve, which should be recognized by the posterior rhinoscopic examination; though, as there remains no protrusion, the flattened surface may be regarded as normal, if carelessly examined. The examination should reveal the mucous membrane of the naso-pharynx to be more than normally red; and often will be found upon the flattened surface some inspissated secretion. With the aid of the laryngeal mirror, the examiner (using a small applicator, with cotton wrapped tightly over end) will find it easy to enter probe one-eighth, or even one-fourth of an inch into the soft tissue, which as described, causes the flattening in vault of the naso-pharynx. It may be well to state that the worst cases are those found most frequently in the ill nourished.

Treatment: I find most satisfactory curretting these growths at any stage,

using a silver finger nail, or a curette with long handle. Application is made just before and after operation of a full strength pure carbolic acid solution on cotton mop, to the location. I oppose the use of nitrate of silver in these troubles. The hygienic conditions, etc., of patients must be fully guarded for best results to be obtained; and, usually, large doses of iron are called for, with notice paid to bowels for a few weeks.



Pregnancy Complicated by Uterine

Fibroids.—Haultain (Brit. Med. Jour.) reports ten cases treated by laparotomy, with two deaths. The operation was performed four times during pregnancy, twice during labor, three times after expulsion completed, and once after labor had ceased with expulsion. The writer's conclusions are as follows: 1. Fibroids tend towards sterility. 2. The association of pregnancy with fibroids in themselves sufficient to give rise to symptoms, is an extremely anxious complication. 3. That treatment in all cases should be expectant, but no complications arising myomectomy or hysterectomy should be adapted.

Yeast Food Extracts.—Chapman answers the recently published strictures of Gamgee against food extracts made from yeast as compared with those made from meat. Gamgee's points are given in quotation marks: ("Yeast extract differs from meat extract in a startling manner." Apart from the presence of creatine and creatinine in the latter, and its absence in the former, there is no established difference of any importance. The creatine and creatinine are not known to possess any physiological value. (2) "They contain none of the flavoring and odoriferous principles which cause extracts of beef to be palatable. (3) "They (yeast extracts) abound in the nucleoproteids. This is not the case. The nucleoproteids are destroyed in the process of manufacture. (4) That the purin nitrogen contained in the yeast extract is half as much more as in meat extract." This is a mistake, but even if true, the fact would have no practical significance with quantities such as are in question. (5) "That our knowledge in no way permits us to affirm that the ademic of yeast extract is not a much more injurious body, in so far as the animal body is concerned, than the hypoxanthin of beef." The writer contends that our knowledge does not permit us to affirm anything at all, as regards the relative injuriousness of these two bases, when dealing with such quantities.—Edinburgh Medical Journal.

Charlotte Medical Journal

Published Monthly.

EDWARD C. REGISTER, M. D., EDITOR
CHARLOTTE, N. C.

ANTI-TYPHOID VACCINATION IN THE ARMY.

A board of medical officers of the United States Army, met a short time ago to consider the advisability of inoculating American soldiers and hospital attendants for the prevention of typhoid fever, reported favorably on the proposition. A careful inquiry regarding experiments in other countries had satisfied the board that no harm would accrue from the practice and that its adoption might be of some good. As there has been an appreciable accumulation of evidence to support these opinions, and as there is to be no compulsion, it is to be hoped that the experiment will be tried.

For at least twenty years, bacteriologists have been searching for a serum which would at least act as a safeguard against typhoid fever and some of them, notably Chantemesse and Widal, believed that they had produced an extract which would accomplish even more. They claimed that their preparation had a curative value and that it might be used to advantage when the disease had actually manifested itself, as is the case of antitoxin for diphtheria.

The remedial virtue of the French serum and of other sera prepared in the same general manner has not been sufficiently demonstrated to warrant much faith. The protective influence, although long in dispute, has been established rather more firmly.

One of the anti-typhoid sera used in India and South Africa was manufactured by Professor Wright and Major Leishmann, of the Army Medical School at Netley, England. Another was made by Dr. Alexander MacFaydean. Doubts of the efficacy of these sera have been excited by the fact that they were not infallible. Some of the soldiers who had been treated with one or the other were made extremely ill and ran a high temperature, while in a few instances death resulted.

Nevertheless, two medical commissions appointed to study the subject reported with unanimity that susceptibility to the infection was decreased while the mortality was distinctly reduced by the use of the serum and these conclusions were sustained by statistics. A much larger percentage of cases occurred in the unvaccinated. In other words, while the immunity insured is not absolute, it seems to be distinct enough to be worth attaining; the benefit is limited.

Experience with serum-therapy shows that the system has achieved greater success with diphtheria than with other diseases. For instance, the antitoxin for tetanus sometimes fails to produce the desired effect, while the same is true in regard to vaccine lymph, and the duration of the immunity given by it is curiously uncertain. And still there are few physicians who would hesitate to recommend a prompt resort to vaccination if an epidemic of smallpox arose. Anti-typhoid serum is a novelty as compared to vaccine lymph and its value undoubtedly is relatively much smaller, but to disregard the possibility of advantage from its employment is hardly judicious. There is more reason for giving the new serum a trial in the army than in civil life. Owing to the conditions existing in camp, typhoid fever is communicated with appalling facility. Out of every twenty deaths among the United States soldiers during the war with Spain, seventeen have been officially attributed to typhoid fever. The bullet was far less murderous than disease. The impracticability of adopting in an army suddenly enlarged to unusual proportions the sanitary safeguards employed in private life certainly furnishes a very strong argument for a resort to such other precautions as give promise of general utility.

THE RAPID TERMINATION OF THE FIRST STAGE OF LABOR.

The perennial discussions concerning the value of various procedures designed to terminate the first stage of labor, where hasty delivery is imperative, have received fresh impetus from the enthusiastic reports of a group of men who practice vaginal Caesarian section in these cases.

This operation, brought out by Dührssen some years ago, had fallen into comparative obscurity in this country, until developed and warmly advocated within the past four years by Fry, of Washington, and others. The entire question of *accouchement force* is still in the greatest confusion, each individual operator holding his own opinion as to the indications for, and the method of rapidly emptying the uterus, pregnant at term. Indeed it is held by one fraternity that there is but one possible necessity for very rapidly terminating pregnancy, that being profuse, concealed hemorrhage.

It is even maintained that the occurrence of eclampsia does not require the uterus to be emptied in a less time than from six to eight hours. The lowering of blood pressure, by puncture of the membranes and by means of drugs, seems to exert even more effect upon the course of the disease than does precipitate delivery with its attendant

shock. Inspection of recent papers and their discussion, however, brings out the fact that the most general treatment for eclampsia, is still rapid delivery, dilation of the cervix being brought about by numerous methods, each advocated and practiced by those to whom one special technic has appealed, and who have become expert in the application of the procedure of their choice.

Manual dilation, elastic bags, metal dilators, all have their following, and of late, as has been said, the little known method of vaginal Caesarean section, has been brought out.

When carefully analyzed, this operation seems illogical and inadequate. In the first place it is difficult of performance; the marked hemorrhagic tendency of the pregnant uterus, the long incision necessary to extract the child, and the difficulty of suturing the upper end of the incision, all unite to make an intricate task. Then, when the child has been extracted from the uterus, the problem remains how to get it through the vaginal canal. In nulliparae the vagina is ordinarily small and contracted, and it is hard to understand how a fully developed child can be readily drawn through it without marked laceration and severe bruising of the vaginal tissues. As a matter of fact it is often necessary to deeply incise both vaginal sulci before delivery is made possible, this leaving still more tramatized to cause complications in convalescence.

Again, vaginal Caesarean section is of absolutely no value in any obstructive condition. Pelvic deformity, obstruction by a tumor, etc., absolutely precludes the possibility of its employment.

Upon the whole, it would seem that no ideal method of terminating the first stage of labor has as yet been perfected, and that vaginal section is not destined to play any great part in the development of a universally ad opted technic.

THE MEDICAL SIDE OF THE RACE PROBLEM.

Dr. C. W. Stiles, in one of his lectures recently delivered before the medical department of Tulane University, brought out some startling facts bearing upon the prevalence of certain diseases in those portions of the country where the negro population is greatest.

Taking the entire country, 11.6 per cent of our inhabitants are negroes. The bulk of these are concentrated in fifteen States, including the District of Columbia. These fifteen States average 34.34 per cent negro population and show an average typhoid death rate of 72.70 deaths per 100,-

000 inhabitants. This is far in excess of the average typhoid death rate for the United States, which is 46.5 deaths per 100,000. The next seventeen States have at least 1 per cent, but less than 10 per cent negro population, and have an average negro population of 2.48 per cent, an average of typhoid death rate of 30.25 deaths per 100,000 inhabitants, namely, a death rate below the average. The next eighteen States have less than 1 per cent negro population; the average is 0.42 per cent negro population and 25.51 deaths from typhoid per 100,000 inhabitants.

The death rate from typhoid is much higher among the negroes than among the whites. For white males it is 37.4, negro males 75.3, white females 27.4, negro females 56.3.

In tuberculosis the proportion of deaths in the whites is to that of the negroes as 1735 to 4906, or nearly three times as great among the negroes as among the whites. From all causes combined, the white death rate is to the negro death as 173 to 305, or not quite 1 to 2. As distributors of the diseases due to soil pollution, the negro is to the white about in the proportion of 795 to 438. Taking the States of Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi and Louisiana, we find that there are on an average 833 negroes to the 1000 whites. In Massachusetts, Rhode Island and Connecticut there are fourteen negroes to the 1000 whites.

In the Southern States mentioned, with 833 negroes to the 1000 whites, there are beside the diseases already referred to, three diseases in particular which are of special importance in the connection with the medical side of the negro, namely: malaria, hookworm disease and Cochinchina diarrhea. All three of these diseases are, and under existing conditions must be, more common in the negro than in the white, but they are all three relatively more severe in their effects upon the white than upon the negro. The result is that the whites are more likely to die or more likely to come under medical treatment than are the negroes. Or expressed in another way, the negroes are more likely to harbor and spread these diseases than are the whites, hence for these maladies the negro must theoretically act as the great reservoir for infectious material.

The negro is less likely than is the white to screen his house against mosquitoes, hence he is more likely to infect mosquitoes which, in turn, carry malaria to the whites.

GENITAL OBESITY IN WOMEN.

The relationship existing between obesity and menstrual disturbances or sterility

have been known for time immemorial. In a recent work (Paris, 1908), Berkovitch has classified the etiologic conditions in which one meets with genital obesity. This may arise in the different periods of the genital life of woman. Obesity is frequent in young anemic or chlorotic girls who have a scanty or irregular menstruation. The obesity may disappear rather quickly as soon as the menses become regularly established. In some cases, instead of an overproduction of fat, one may observe an elastic edema which pits upon pressure. This edema is particularly marked on the face, usually in the morning; sometimes it is found at the ankles and may be more marked at night, but it is rarely met with on the hands and other parts of the body. In 1901 Balche recorded two cases under the name of "pseudo-myxoedema," where the women presented the disturbances of ovarian insufficiency, with a hard edema of the legs and abdominal walls and puffiness of the face.

Another very frequent type of obesity is that met with after marriage. It may be that the excessive function of the ovary weakens the patient or perhaps a uterovarian infection sets up a functional ovarian insufficiency. Obesity is very common in prostitutes, this being also favored by laziness and alcohol.

A not less frequent type of obesity is the so-called maternal form. Very often during the first few months of pregnancy women put on fat and Charrin has demonstrated that, during pregnancy, the ovaries are in a kind of physiological sleep. Ovarian insufficiency here becomes added to hepatic insufficiency and a decrease in the process of oxydising and thus obesity results. Sometimes the deposits of fat may disappear after pregnancy but more frequently they are the starting point of an obesity which progresses after gestation, and particularly after nursing. The sudden cessation of nursing, by producing a temporary hypernutrition is, according to Maurel, often a cause of obesity.

There is still another well known type of obesity, namely, that of the menopause. As in all the other forms of genital obesity, the development of fat appears to be due, not to the suppression of the menstrual flow, but to a disturbance in the functions of the ovary, particularly of its internal secretion which regulates the oxydization of the female organism.

This pathogenesis is based on animal experiments. Castration of female animals markedly influences their general nutrition and soon brings about a development of fat. Among the domestic female animals, the pig and cow are those more frequently

submitted to castration, and after this operation the animals fatten and soon acquire a marked obesity. The work of Brown-Sequard has shown that the ovary possesses an internal secretion which favors oxydation of phosphated organic substances, carbohydrates and fats. When this function is wanting after the menopause, before puberty or after removal of the ovaries, a more marked retention of these various substances occurs and obesity results.

Of recent years Sicard and Roussy have observed all the symptoms of Dercum's disease in two cases after removal of the ovaries. Berlovitch has also recorded several similar observations where the commencement of the affection coincided with the appearance of most of the symptoms of ovarian insufficiency, before the time of the natural menopause, which, in these cases, is often precocious. It would consequently seem that in certain cases at least, Dercum's disease should be attributed to ovarian insufficiency, rather than to disturbance in the thyroid gland.

FRACTURE OF THE PATELLA.

After fracture of the patella blood must of necessity accumulate in the joint-cavity. The blood in the knee is slow to absorb and if immobility is prolonged adhesions will form. This blood can be completely removed at operation and the desirability of removing fragments of bone which interfere with the functions of the joint, needs no better argument for the propriety of treating these fractures surgically.

It is hardly probable that if the tendon of the quadriceps be kept still, healing will not be slow and passive motion may be considered safe and desirable much sooner when accurate coaptation of the torn edges of the tendon has been secured than in cases where the intervening space must be filled through blood clot by the fibrillae growing from the severed ends.

All this means absence of permanent adhesions, because the latter gain in strength as does the sutured tendon, and a patient will readily endure their rupture at the end of a day or two when an anesthetic would be required and bleeding more profuse and very likely reproduce them because of the pain on voluntary motion at the end of five or six weeks.

Tension on the sutures is extremely slight unless the fracture be old and the fragments considerably separated, but if a knee joint is closed without drainage tension arises from an excess of synovial fluid poured out after irrigation and secondary trauma. In some cases the same kind of pulling on the sutures will be produced that distention of the intestines causes after

abdominal operations. All that is necessary is to insert a twisted silkworm gut drain for a few days, which will avoid all trouble. No infection will accrue if the skin has been properly prepared before interference.

Absorbable sutures are now almost universally used and are the only ones deserving of consideration. The ultimate strength of the tendon depends absolutely on the reproduction of its own tissues and any suture-material which is still embedded in the end of three or four weeks is simply a foreign body, quite useless if not dangerous for the patient.

The complete restoration of the patella is of far less importance than a careful coaptation and suture of the aponeurosis on either side and any bit of bone which it is impossible to retain in place by suturing through its periosteum had better be removed. It is quite apt to cause harm by giving a rough posterior surface to the patella, while its removal and consequent absence is of no consequence.

ENDOCARDITIS DURING TYPHOID FEVER IN CHILDREN.

Endocarditis during typhoid fever is a relatively rare complication, and when the heart is involved it is usually a myocarditis. Nevertheless, authentic cases of endocarditis have been recorded and it would appear to be present more frequently in children than in the adult. In a recent thesis (Paris, 1908), Stempowski points out that endocarditis becomes more frequent as puberty is approached. Thus, out of sixteen instances it will be found that one case occurred in a child three and a half years of age, three times in children five years old, four times in children from eight to nine years, and in eight instances the patients were from thirteen to fifteen years of age.

This complication appears to be more frequent in hospital, than in private practice, probably on account of the poor physical condition of the hospital patients.

The endocarditis met with in typhoid fever is most commonly due to an infection of the cardiac valves by the specific bacillus. This is not, however, absolute because not infrequently the valvular lesion may be produced by organisms of secondary infection. Roques and Corneloup have recorded one case, while as far back as 1898, Castaigne referred to this fact. These pathogenic agents generally give rise to a fibrinous endocarditis without ulceration, usually developing on the mitral valve. At the same time that the endocarditis develops, a myocarditis or a peri-carditis may also appear, in which case the clinical picture is extremely complex.

The diagnosis of this cardiac complication is not always an easy matter, because the affection develops silently and requires a careful daily examination of the patient. There is nothing in the general evolution which would lead one to suspect this complication. The temperature chart shows only a very slight rise and the pulse becomes more frequent, but these symptoms are not sufficient to allow one to make a diagnosis of endocarditis, so it is to the physical signs that one should resort. It is not percussion, inspection or palpation that will help us, but auscultation may be of aid upon the condition that it is done with care at least once or twice every day.

In the first place, the first sound becomes less distinct but only infrequently does the second sound become changed. This indistinctness cannot be called characteristic of endocarditis, because it is also encountered in myocarditis. Consequently, the only absolute evidence of endocarditis must be awaited for, namely the soufflé. This appears usually at about the tenth or eleventh day and is nearly always systolic at the apex. Most frequently it is soft, but it may take on the characters of a steam escape, and is almost always propagated to the axillary region. On the other hand the pulse is rapid and the arterial tension lowered. This endocarditis rarely takes on the malignant form; it is latent in its appearance and remains latent during its evolution. Occasionally it is only found at the time of convalescence and if the statistics of the Johns Hopkins Hospital are to be relied on a complete recovery may usually be looked for. These patients rarely present the usual complications of endocarditis and the case recorded by Castaigne, in which numerous pulmonary emboli occurred is rather an exception. Consequently, the endocarditis of typhoid has a rather good prognosis and when these patients do die it is rather more from a myocarditis.

The interpretation of the soufflé may cause some hesitation. Its regularity and its propagation distinguishes it from the paricardiac friction sounds. The soufflé of functional insufficiency will be found in a flabby heart with a small and rapid pulse. In this case the heart is the seat of a lesion of the myocardium and is greatly distended on account of the lack of muscular tone. It, however, should be pointed out that the diagnosis between a soufflé from a valvular lesion and one due to dilatation, is often impossible.

THE QUESTION OF CASTRATION FOR TUBERCULOSIS OF THE TESTICLE.

At the present time much has been said relative to the conservative treatment of

tuberculosis of the testicle, and it may be well at the present time to consider the other side of the question. There are many surgeons who believe that an operation cannot be too radical, because other parts of the uro-genital apparatus are first involved, while the testicle is invaded by the tuberculous process only secondarily, consequently being involved in a descending extension. For this reason they hold that complete removal of the testicle is insufficient.

The tuberculous process continues to spread and the immediate good effect of the operation sooner or later proves to be an illusion. In Germany, a descending extension of uro-genital tuberculosis is admitted by a large number of surgeons, and so eminent authority as König believes that the testicle becomes involved by a descending process seated in the prostate or bladder, and that a primary infection of the seminal gland, without disease being present in any other part of the body, is an exception.

It was Gussenbauer's opinion that the testicle was involved secondarily by a descending infection. These authorities considered castration of one testicle as absurd, and they looked upon bi-lateral castration as practically useless, for the reason that if the affection involves one gland the disease already exists in the prostate and seminal vesicle. In their opinion another factor should also be taken into consideration, which would be decidedly against the total removal of the testicle, namely, the mental effect of the operation.

It has been shown by a number of writers that the internal secretions of the testicle play an important part in metabolism. The recent discoveries in physiology have worked riot among the number of surgeons, but in this respect it is well to consider the ideas emitted by von Bruns, because of their importance, as well as the light they throw upon the subject.

In Kocher's writings, the idea is expressed that partial resection means the accomplishment of only half the work, and it is also stated that the testicle is more involved than can be detected clinically, so that recurrence is practically certain. Von Bruns is of the same opinion, and gives statistics showing that in 40 per cent. of his cases, six months after anything was noticed, the testicle was diseased, as proven at the operation. If the duration was over six months, it was present in 60 per cent. of the cases. Now, taking into consideration that the process often proceeds without any evident clinical changes, it can readily be conceived how little partial excision of the parts apparently involved can help the patient in

the majority of cases, and how seldom a durable success can be attained, unless the entire seminal gland is removed.

Still another argument speaks against limited excision, namely, that in about 50 per cent. of all cases of tuberculosis, the disease at a later period develops in the other gland, and, according to von Bruns' statistics, 25 per cent. of cases in which castration was performed on one side later on developed the disease on the other.

From this it may be concluded that prevention of the development of the disease in the apparently healthy testicle is to be found in early castration of the one afflicted.

The opponents of radical treatment declare castration superfluous, while others uphold that the operation is most disadvantageous to the patient, because the primary focus is left behind in the body. Of course, it is here understood that tuberculosis of the testicle is due to a descending infection from the prostate and seminal vesicle, consequently a secondary process.

Baumgarten has thrown much light on this subject, when he demonstrated in rabbits that tuberculosis of the bladder, in the prostatic urethra and in the prostate, could be produced by injecting cultures of very virulent tubercle bacilli, but he was never able to demonstrate an infection of the cord or testicle. He observed his animals for a long time and never found a process extending up along the ureters. On the other hand by infecting the testicle, he found an ascending infection along the spermatic cord. In this case he injected the bacillus directly into the epididymis and cord, and, in order to prevent the injection reaching the deep portion of the vas deferens, he ligated it. It was also proven that none of the inoculation fluid entered the cord when injected into the epididymis, as no tumefaction of the latter could be found near the epididymis, and microscopically it was found healthy.

In all these experiments a rapid ascending extension took place, but the opposite testicle never became involved, and this authority correctly concludes, we think, that the process always follows the current of the secretions of the lymph, and never in an opposite direction.

Pathologically and clinically these experiments would seem correct, and certainly coincide with facts, namely, that tuberculosis of the testicle often arises when other portions of the uro-genital apparatus are intact. It would also go to show that descending infection by the tubercle bacillus is impossible and that castration performed when the disease is still of short standing and not advanced will bring about a complete recovery, because it prevents the possi-

bility of an ascending infection from taking place.

Von Bruns gives quite an imposing number of complete recoveries after unilateral castration, namely, 46 per cent., and what makes it particularly valuable is that the observation of his cases continued over a period of 34 years.

If, however, one finds frequently other portions of the uro-genital tract involved, it is only in the very advanced stages of the process, especially where the prostate and bladder become infected secondarily from the testicle or by a descending infection from the kidney. Only 12 per cent. died from tuberculosis of the uro-genital apparatus after unilateral castration had been performed, and in almost all the fatal cases the patient presented the picture of urinary tuberculosis before the operation was undertaken. The same may be said regarding the cases of bilateral castration, of which 15 per cent. died from tuberculosis of the uro-genital system, but the majority recovered, thanks to the operation. The ultimate duration of cure in bilateral castration amounted to 56 per cent., and the time over which the cases were observed was thirty years.

The great number of recoveries in which unilateral castration was done would seem to refute the statement that an extension of the process from one testicle to another takes place.

Equally favorable results have been reported by Simon, who, during the lapse of twenty-two years operated on 107 cases, the space of time during which they were followed varied from ten to twenty years. Out of 92 cases, 59 were alive, 54 of whom were free from any evidence of tuberculosis. Of the 33 who died, 26 succumbed to the tubercle bacillus and 7 from an intercurrent disease. 61 cases had remained free from tuberculosis after the operation, making 66.3 per cent. recoveries. Simon learned the ultimate outcome in 29 out of 34 cases in which bilateral castration had been done, with the astonishing result that only 8 of them had died.

From all this we may conclude that the advocates of conservative operative interference have yet to prove their position, which can only be shown by a more extended trial of epididymectomy in suitable cases.

RAILROAD TRESPASSERS INVITE DEATH.

That those unfortunate individuals who meet death while trespassing on the property of railroads are in reality to be looked upon as a species of suicide is a proposition which is amply demonstrated by the enor-

mous number of deaths that occur every year from this cause alone in the United States. It is a notorious fact that to the public mind railroads deserve small consideration and that financial remuneration must be made on the part of the railroad in the case of such accidents, and it makes little difference whether the railroad is at fault or not. Dr. Lucien Lofton, of Emporia, Va., in a recent paper, presented this problem in most forcible manner. His treatment of the subject is most interesting and intelligent. At the same time he presents some very startling statistics.

Should a man out of curiosity board a train infected with a serious malady, and in turn become infected, he would believe he had sufficient and just ground to recover legally a penalty. Should a lawfully posted crossing be in his course, whether asleep, intoxicated or indifferent, and he receive injury by being struck by a passing train, the positive conclusion is promptly reached that the company owes him a sum of money. If he receives a cinder in his eye while passing along a public highway parallel to a railroad, and serious local involvement results, the first emergency is a suit for damages.

If a railroad right of way is found to be a better driveway or walkway than that on which he is entitled, and he is the victim of an injury of his own volition, or by a scheduled train, the court must be called on to adjust the grievance. If he surreptitiously boards a moving train and is injured thereby, the railroad must defray all expenses incident to his illness and compensate him moderately, immoderately or otherwise, provided he has "standing in his community."

During the past twenty years 110,000 persons who may be looked upon as trespassers lost their lives outright in the United States. It may be safely estimated that at least 15 per cent. of those injured either died as a direct result of their injuries or were maimed beyond making a livelihood and ultimately became public charges. Indeed, every seventh person killed on a railroad is a trespasser, of which only about 30 per cent. are vagrants. In 1908, 589 trespassers were killed and 708 injured on a great Eastern system. On an extensive Western system ninety lost their lives and 130 were injured from June 30, 1907, to June 30, 1908. A large railroad property in the South shows a casualty a little in excess of the last system referred to, and 410 injured. These three arteries of commerce are taken at random, some lines were more fortunate and others less so, during the past fiscal year ending June 30, 1908.

Figuring then that in round numbers fifteen hundred distinct railroad lines in this

country, and each road averages killing only five trespassers annually from 1909 onward, there will have been subtracted each year from the nation's citizenry seven thousand five hundred lives, which go down to an unwarranted and untimely death.

This enormous annual death harvest is to be accounted for by a lack of forethought, or disposition to utterly disregard danger, or a gambling instinct so characteristic of a young and growing nation of chance.

MASSAGE OF THE HEART.

Desperate measures must sometimes be resorted to in attempts to resuscitate persons who have apparently succumbed during the administration of an anesthetic. Direct massage of the heart in such cases has been employed in but a few cases, and while it appears to have been successful in a small percentage of such cases the doubt arises whether it is justifiable. Cardovic (*Archiv. für klin. Chir.*) collected forty-five cases on record in which this was done. The massage succeeded in resuscitating the patient in seventeen cases, and in nine of these the patient completely recovered; in the others the heart action failed again after working for a longer or shorter period. In all but five cases the syncope occurred under an anesthetic; in the others from embolism in the pulmonary artery or as the result of attempted suicide by hanging, asphyxia from some laryngeal or tracheal affection or in a new-born infant. The best results seem to be obtained with massage applied from below the diaphragm; it failed in every case with the transdiaphragmatic technic. The outcome is better the earlier after the syncope the massage is undertaken; the first five minutes give the majority of successes. The massage failed constantly in the cases reported if ten minutes had elapsed after the onset of the syncope before the massage was commenced. The prospects are more favorable for direct massage of the heart when the syncope is of circulatory rather than of respiratory origin. When other means of resuscitation fail to elicit the slightest response, and especially in "white" syncope, direct massage is justified; the heart is grasped through the diaphragm, the hand being inserted through an incision above the umbilicus. The ventricles are squeezed rhythmically between the fingers or the heart is pushed against the front wall of the chest. The massage must be kept up for a long time supporting the spontaneous contractions as otherwise the heart may flag again. Sometimes fully fifteen minutes elapsed before the heart responded to the effect of the massage. Artificial respiration and traction of the tongue should be kept up with possibly tracheotomy or intubation

to ensure a rhythmic supply of air or oxygen to the lungs; the pelvis should be raised and the abdomen compressed to aid in increasing the blood pressure by overcoming the paralysis of the vasomotors, supplemented by saline infusion and possibly also injection of adrenalin.

INTESTINAL ANTISEPSIS.

Intestinal antiseptics is a problem which has long occupied the minds of those who choose to theorize upon such questions. At the same time there are some who have attempted to find the facts by investigation and practical experimentation. The idea that we could administer drugs which are capable of producing a condition of antiseptics in a canal several yards in length and that such substances will at the same time exert no inimical effect on the protoplasm of the tissue cells seems a somewhat remote possibility. It is true, however, that, in some instances, certain substances which possess a specific influence on particular micro-organisms have long been employed. Mercury administered in proper doses seems to be without toxic effect for the tissue cells and yet it acts in some way unfavorably upon the micro-organisms which causes syphilis. Quinine kills the malarial parasite in the blood, but in proper doses has no action which can be said to be inimical. It is quite conceivable that certain substances entering the alimentary canal may render the intestinal contents unfavorable for the growth of bacteria. Salol and allied drugs have, so far it is possible to tell, given excellent results when used for the purpose of producing intestinal antiseptics. At least in such a disease as typhoid fever they seem to diminish putrefactive changes and prevent typhinites. But when one stops to think about it, these drugs are largely absorbed from the bowel, after changing into some other substances which are excreted chiefly by the kidneys. Indeed the condition of the kidneys and their ability to eliminate drugs must always be considered when such substances are administered. Furthermore, even granting the possibility of producing intestinal antiseptics, how far is it desirable to do so? There are useful and benign as well as harmful germs which inhabit the intestine. Antiseptics would destroy both kinds, and this might conceivably do as much harm as good. In discussing this question the mind of many will inevitably turn to the prevalent use of so called intestinal antiseptics in treating patients ill with typhoid fever. It is to be admitted that their employment seems to accomplish some good. But when one remembers that typhoid fever is a general infection, that the typhoid germs are not, as was once believed,

confined to the intestine where they multiply and produce their toxins, that the intestinal lesions are only the local manifestation of general infection one can scarcely believe that the use of intestinal antiseptics have any considerable effect on the course of the disease, unless their absorption into the blood might there enable them to exert a further bactericidal action.

Steele, whose article appeared in the Journal of Medical Research, has studied this question of intestinal antiseptics quite exhaustively. The drugs which he employed were bismuth salicylate and betanaphthol. He found that these substances distinctly diminished the bacterial growth in the intestine in *normal* subjects, but he also found as others had pointed out before him, that this influence might be exercised upon useful and benign micro-organisms as well as upon those which were pathogenic, and thus do more harm than good. It is interesting, too, to note in this connection that the results obtained by Steele varied very widely under the influence of diet. Indeed, diet and purgation had more effect in modifying the growth of intestinal bacteria than did the use of intestinal antiseptics. The Therapeutic Gazette comments that this is a conclusion which can be readily concurred in by practicing physicians. For years we have constantly taught that the use of beef tea, chicken broth, and similar animal extracts in typhoid fever and putrefactive diarrheas was bad practice, and this has been confirmed by noticing that patients receiving such foodstuffs were not only subject to increased diarrhea but to the passage of large quantities of extremely fetid flatus, which disappeared if other forms of diet were resorted to, because these animal broths are identical with many of the culture media which are commonly employed in the bacteriological laboratory when the most favorable conditions for the artificial growth of certain bacteria are desired. Steele therefore concludes, although he has made no comparative study of the effects of the different foods, that by regulating the amount and character of the food ingested we have the strongest and surest means of checking bacterial activity in the intestines.

MORRIS POINT OF TENDERNESS IN APPENDICITIS.

McBurney's point of tenderness has long been looked upon—and justly so—as one of the most important signs of appendix disease. Recently Dr. Rob't. T. Morris has described another diagnostic point of tenderness which differs in its location from McBurney's. In the words of Dr. Morris: "Instead of going out on the line to a point

an inch and a half from the anterior superior spine of the ilium, come back on the line to a point situated an inch and a half from the navel. Here we find a point of definite diagnostic value." The explanation of this point of tenderness as given by Morris is as follows: The point here described has reference to the right lumbar ganglia of the sympathetic nervous system, and notable tenderness of these ganglia has a diagnostic value which may briefly be placed in classification under the following heads:

1. In the early stages of an acute infective process of the appendix, the right lumbar ganglia are tender and the left are not. Under these circumstances the point here described is of secondary importance.

2. *a.* When an acute inflammatory process of the appendix has subsided, . . . there may be no tenderness at McBurney's point, but there is tenderness at the point of the left lumbar ganglia.

b. When the appendix is undergoing a normal involution process . . . there may be no tenderness at McBurney's point, but there is persistent tenderness at the point here described. There is no tenderness at the point of the left lumbar ganglia.

c. When the appendix is congested without the presence of infection . . . there may be little or no tenderness at McBurney's point, but there is tenderness at the point here described. There is no tenderness at the point of the left lumbar ganglia. . . . To recapitulate: A patient comes in with the appendix in the form of a question mark. Right lumbar ganglia tender alone, appendix trouble. Right and left lumbar ganglia tender together, pelvic trouble. Neither right nor left lumbar ganglia tender, trouble somewhere cephalad from pelvis and appendix.

Dr. J. C. Hubbard believed that Morris ascribed this tenderness to the nervous system without much thought. The former after investigating the subject concluded that the phenomenon is to be accounted for by the secondary involvement of the lymphatics rather than by tenderness of nerve ganglia. The glands into which the lymphatics of the appendix drain correspond in location in the main to the situation of Morris' point. Quener states that it is common in cases of fulminating appendicitis to find the glands of the ileo-colic chain enlarged and inflamed.

Ricard and Bloodgood have reported cases in which suppuration of these lymph glands actually occurred secondary to appendicitis.

Dr. Hubbard concludes that in acute appendicitis tenderness at Morris's point is of

ess importance than the symptoms caused by the appendix itself.

In chronic appendicitis tenderness at Morris's point may be of distinct diagnostic value. Tenderness at this point, even though the only physical sign, makes the diagnosis of appendicitis by the rule of chance probable; when combined with tenderness at McBurney's point, the diagnosis becomes more certain. Its absence does not rule out appendicitis, and it may occur in other conditions.

The point has by no means the importance given to it by Dr. Morris.

THE CANCER PROBLEM.

The cancer is very prevalent and the cause of a large percentage of deaths in America is beyond question. Under this term (cancer) all kinds of malignant tumors are included—improperly it is true—but that phase of the question is merely academic. It has only been within recent years that the so-called cancer problem has presented itself to the scientific world in its truly serious aspects. That malignant tumors are rivals of tuberculosis and pneumonia as a cause of death and that they are on the increase is apparently true. Yet the fact that the scientific investigation of these diseases has been systematically undertaken only comparatively recently, may possibly have led us to somewhat erroneous conclusions. New York was the first State in this country to establish an institution for experimental cancer research; other States have followed in the work, and these with the activity of European investigators have certainly given promise of some positive results. As yet we have only reached the threshold of knowledge. Statistics presented by Dr. H. R. Gaylord, of the New York Cancer Laboratory, at Buffalo, asserts that the increase in the disease in the State of New York is little short of appalling. The average death rate per 100,000 population for 1906, 1907, 1908, taken collectively, is 76, showing an increase in thirteen years, from 1806, to 1909; of 28.8 per cent. The average death rate per 100,000 for 1806, 1907, and 1908, for tuberculosis is 169, showing a decrease in the last thirteen years of 9.1 per cent. We well understand why tuberculosis is decreasing. It is the result of our knowledge of the infectious character of the disease and of the new well organized warfare which is being opposed to it. Our knowledge of the nature of the cancer as a disease is in its infancy, but it is rapidly advancing, and the outlook today offers a very bright hope that in the future we shall understand and combat the disease by methods based on the present experimental research.

THE RED LINE IN HELLER'S TEST FOR ALBUMIN.

Every doctor who is familiar with urinalysis has frequently noted, when performing Heller's test for albumin, the presence of a reddish ring at the point of contact between the urine and nitric acid. This red line may be seen with or without the white band which indicates the presence of albumin. It varies in width and intensity and is never as sharply defined at its points of contact with the acid below, and the urine above, as is the line of albumin. Few are they, however, who attach any importance to the presence or absence of this reaction. Text books are either silent on the subject or dismiss it with scant attention. Yet every physician must realize that a reaction of so frequent occurrence must possess some significance. Dr. D. H. M. Dawborn, the distinguished New York surgeon, has called attention to the importance of this phenomenon as being of great value as an indicator of hepatic sufficiency or insufficiency; and he affirms that it is his belief that the patient whose urine shows this red line is in greater jeopardy than the patient whose urine shows a very narrow white line of coagulated albumin instead. The reaction is to be accounted for, as indicated above, by the inability of the liver to perform its function of destroying poisonous substances which are carried to it by the blood-stream. This, as well known, is one of the chief functions of the liver. It not only so changes the composition of the food brought to it from the bowel as to make it fit to promote the constructive metabolism of the tissues, but conversely, the liver also exercises its well-known power of governing destructive metabolism. Dawborn, believes that the absorption of toxic products from the bowel will do no serious damage so long as the liver is able to perform its function of destroying such substances. This protection will end, however, sooner or later when the liver becomes unable to carry on the work. So long as hepatic sufficiency exists no red line will appear in the urine when subjected to Heller's test, but so soon as the red line does appear it is an indication that the amount of poison is excessive, or that hepatic insufficiency has supervened. Ultimately then, as the above named writer believes, persistent auto-intoxication of intestinal origin which places too great a burden on the liver is indicated by the presence of this red ring, and a patient in whose urine this reaction is persistently present is losing vitality with extreme speed. Habitual constipation, with retention of fecal masses in the pockets and pouches along the large intestine leads to the constant absorption of toxins which are

extremely inimical to the well being of the individual. Constipation is a matter in which the two main troubles are a paresis of the large bowel plus habitual insufficiency of water drinking. Most people all their lives invite trouble of this kind, and consequently shorten their lives, by taking as their guide that poorest and least reliable of tests as to their duty in the matter of ingestion of water—the question whether or not they happen to be thirsty. In old people who are feeble and tottery and in whom by abdominal palpation plus digital examination *per rectum* fecal masses as generally detected the red line is almost constantly found. Measures which cleanse the bowel and keep it clean—such as colonic irrigations—are followed by disappearance of the reaction. Younger people whose habits are sedentary and who are neglectful of proper hygienic measures, especially the drinking of large amounts of water, and in whom constipation is notoriously present give evidence of auto-intoxication by the occurrence of this red line in their urine also. Aside from the intestinal toxemia there are other conditions in which the red line is found. Notably among these may be mentioned cases of subacute or chronic pelvic peritonitis or pyo-salpinx in women. There are yet interesting questions regarding this reaction to be answered, viz: What is the chemical nature of this urinary phenomenon? What are its effects?

Editorial News Items.

Meeting of Alabama Medical Society.

With between four and five hundred physicians from all parts of the State present, Dr. B. L. Wyman, of Birmingham, called the annual convention of the Medical Association of the State of Alabama to order April 20, in the Jefferson theatre in Birmingham.

The invocation was offered by Rev. Dr. W. E. Evans, rector of the Church of the Advent, after which Dr. John Watts, city physician, in behalf of Birmingham, delivered an address of welcome, followed by Dr. Joseph D. Heacock, in behalf of the Jefferson County Medical Society.

J. Norment Baker, M.D., of Montgomery, secretary, made his report after the annual address of the president, Dr. B. L. Wyman, was received.

Dr. Wyman told of the growth and development of all departments of the association work during the past year. This growth has been so marked that it is important to stop and in a formal manner make a survey of conditions and causes which have led to the present position of power and influence

which the Medical Association of the State today occupies.

He told of the organization thirty years ago and its standing today unrivaled in its plan of organization and in the fundamental principles underlying its organic law, remaining the same association that it was when first started, an imperishable monument to the genius and masterly intellect of the founders.

He spoke also of the duties and responsibilities of the organization and commended the present plan. The importance of collecting vital and mortuary statistics, the progress made and other movements were referred to.

The State Pasteur Institute at Montgomery was complimented and the work started commended and urged to a continuation.

The education of the public in the prevention of disease was touched on, as was the crusade against the white plague, tuberculosis. The president paid some respects to the proposed State tuberculosis institute, which has not yet been established, but which the Governor has promised to take up just as soon as practicable.

The reports of the vice-presidents were received, as was also that of the treasurer.

Among the delightful social events of the meeting was a luncheon served at the Birmingham Medical College.

A symposium on typhoid fever occupied a most important place in the program of scientific discussions. The program for this symposium was as follows:

"Typhoid Fever: A Study in Etiology and Treatment"—Hardee Johnson, M. D., Birmingham.

"The Pathology and Treatment of Typhoid Fever"—George Dock, M. D., New Orleans.

"Laparotomy for Typhoid Perforations"—William J. Love, M. D., Opelika.

"Cholecystitis as a Complication and Sequels of Typhoid Fever, with Report of Cases"—E. M. Prince, M.D., Birmingham.

Discussion of this symposium was opened by H. A. Moody, M. D., Mobile.

Other interesting and valuable papers were: "Empyema of the Gall Bladder"—Goldsby King, M. D.; Selma, and "Difficulties of Gall Bladder Surgery"—J. Norment Baker, M. D., Montgomery.

In the symposium on Tuberculosis Dr. Sherman Bonney, of Denver, Col., who is a noted authority on the subject, took the physician's side of the question, while Hon. S. J. Bowie spoke from the laymen's side. Dr. J. P. Stewart, of Attalia, and Dr. R. M. Cunningham, of Ensley, participated also in the symposium.

The officers of the association were elected

Friday morning the 23rd, with the following result:

Dr. W. M. Wilkerson, of Montgomery, President; Dr. R. L. Sutton, of Orrville, Junior Vice-President; Dr. Robert James Redden, Sulligent, Senior Vice-President; Dr. J. N. Baker, of Montgomery, Secretary; Dr. Henry Gaither Perry, of Greensboro, Treasurer.

State Health Officer Dr. W. H. Sanders was re-elected for a term of five years.

Mobile was chosen as the next place of meeting.

A Campaign Against Typhoid Fever.

According to the report of the Virginia State Health Department 100,000 people have typhoid fever annually in that State and 1,000 deaths is the least possible estimate. Along with these startling figures the Board announces the plan of campaign against typhoid during the coming summer.

Every effort will be made to enlist the co-operation of all local and county boards of health in stamping out the disease. Every epidemic that appears in the State will at once be investigated by representatives from the State Board, and every precaution will be taken to prevent the spread of the infection.

This is a movement worth the emulation of many other States. One of the most widespread and costly of all diseases typhoid yearly claims its toll of human lives and money, while we remain supinely indifferent.

Before the Legistive Committee appointed by the General Assembly of South Carolina to investigate the affairs of the State Hospital for the Insane at Columbia the Board of Regents urged the absolute necessity of carrying out the following improvements:

"1. That it has become the policy of the State to maintain in Columbia a large central colony for the insane of both races.

"2. That 'State care' is a better system than was afforded by the old method of county support.

"3. That the separate or cottage plan of buildings or wards is better suited in our climate to the needs of that insane than are large conglomerate buildings.

"4. That the separation from the insane (properly speaking) of such classes as the inebriates, idiots, epileptics, etc., who are now associated with them would prove advantageous to all.

"5. That the improvement of the county almshouses by having hospital wards, etc., would relieve this institution from receiving so many helpless dotards.

"6. The establishment of a farm colony for epileptics, a school for the feeble-minded and a hospital for inebriates should form part of the future policy of the State.

"7. That the erection of separate wards for the violent insane is desirable.

"8. That the establishment of a farm colony for the chronic insane is an important problem for future consideration.

"9. The means for separating the tuberculous from the non-tuberculous is at the present time a question of vital importance.

"10. There have recently been observed in this asylum and other Southern institutions cases of pellagra, a disease common in Italy, but new to our country. The board of regents with the co-operation of the State board of health and marine hospital service in this condition and it is expected that a surgeon from that department will soon arrive in Columbia to investigate. There are now 21 negro women and three white men suffering from pellagra.

"11. With a population of 50 per cent. more than we have adequate accommodations, for all departments of the institution are excessively overcrowded and especially that for white men and the two colored departments and the housing of insane of negro men and women in the cellars as we are forced to do, is, to say the least, inhuman.

"12. The excessive population overtaxes the kitchen and dining room service as well as the wards and dormitories; for some time these conditions have been unsatisfactory to our administration and efforts will be made to devise plans for their remedy.

"13. To carry out any of these plans which we are enumerating will require larger appropriations than we have been receiving. It must be borne in mind that our annual per capita last year was \$109, about 30 cents a day, which is less than a sheriff is usually allowed for dieting prisoners. Last year the per capita at Morganton, N. C., was \$155 and at Raleigh, was \$165.

The South Carolina State Board of Health at its meeting in Summerville, April 19, decided to establish a bacteriological laboratory at Columbia for the purpose of furnishing the physicians of the State a reliable and trustworthy place where bacteriological examinations may be made. Perhaps most important feature of all will be the equipment for the application of the Pasteur treatment for rabies. Drs. Lester and Williams were appointed as a committee to make arrangements for the institution.

The Columbia (S. C.) Hospital, which

for a number of years has been maintained by the ladies auxiliary has been turned over to an association of twenty-four physicians. This hospital property is valued at \$75,000. The magnitude of the work and the State-wide importance of the Columbia Hospital has rendered this step advisable. A new hospital building to cost \$30,000 will at once be erected.

The following physicians are those interested in the new organization: Drs. McIntosh, Boozer, Taylor, Griffith, Guerry, Watson, Gibbs, Bunch, Shaw, Guignard, Lester, Whaley, Pope, Boyd, Adams, Kibler, Owens, Boozer, Weston, DuBose, Harmon, Durham, Philpot.

The officers of the association elected at their first meeting are as follows:

President, Dr. D. S. Pope; vice-president, Dr. L. K. Philpot; secretary, treasurer and superintendent of the hospital, Dr. A. Earle Boozer; executive committee, Dr. LeGrande Guerry, Dr. L. A. Griffith; Dr. S. E. Harmon, Dr. T. M. DuBose, Dr. William Weston and Dr. L. B. Owens.

Georgia Medical Society.

The sixtieth annual session of the Medical Association of Georgia was held at Macon on April 21, 22 and 23.

The first day's session opened Wednesday morning, 21st, at 9:30 o'clock, with the following program:

Prayer—By the Rev. T. D. Ellis, D.D.

Address of Welcome—Hon. T. E. Ryals, Macon.

Response to Address of Welcome—Dr. Thomas J. Charlton, Savannah, Ga.

The officers of the association were as follows:

President, Dr. T. D. Coleman, Augusta; second vice-president, Dr. Ralston Lattimore, Savannah; secretary-treasurer, Dr. Claude A. Smith, Atlanta.

A very large number of physicians representing the profession of the entire State of Georgia were in attendance. The papers and addresses were numerous, as well as valuable and interesting from a scientific standpoint.

Payers by Drs. J. M. Brawner, and J. E. Paullin, of Atlanta, touching on the treatment of rabies and hydrophobia, elicited a resolution by Dr. Eugene Smith authorizing the committee on public policy and legislation to support and strongly urge the passage of a pending measure in the legislature for muzzling all dogs. Co-operation of the press was asked in the matter of making public the importance of stopping the spread of hydrophobia. The common house fly as a cause of typhoid fever was presented in a paper prepared by Dr. J. W. Palmer, of Ailey, Ga., and the discussion led to the

passing of a resolution authorizing the president to appoint a committee whose duty will be to warn the people all over the State to take precaution against the little pest.

At the annual banquet on the evening of the 23rd Dr. R. B. Barren, of Macon, was master of ceremonies.

President Coleinan was called on for a response. Dr. L. M. Warfield, of Savannah, spoke for Savannah, and Dr. John D. Shannon, of Forsyth, represented the county physician in easily the most eloquent address of the evening.

Dr. Floyd McRae, of Atlanta, in humorous manner, responded to the toast, "God Moves in a Mysterious Way, Etc." Dr. Rakestraw, of Savannah, had a Kipling recitation that won the house. Dr. H. McHatton, of Macon, dealt with the suffragette in one of the most laughable addresses of the evening. Dr. Charlton and Dr. Martion, of Savannah, and Dr. C. E. Davis, of Atlanta, had responses that were delivered on impromptu calls.

The banquet was attended by all the prominent visitors, and was the real social event of the convention.

The closing session was devoted to the naming of officers for the ensuing year. Dr. T. J. McArthur, of Cordele, was made president; Dr. M. F. Carson, of Griffin, first vice-president; Dr. John R. Shannon, of Cabaniss, Ga., second vice-president; Dr. H. F. Harris, of Atlanta, and Dr. George R. White, of Savannah, were named delegates to the American Medical Association, at the coming session in Atlantic City. Dr. Eugene Smith, of Atlanta, remains secretary and treasurer. Athens was given the next session of the body. Both Atlanta and Columbus asked for the next convention. The date will be the third Wednesday in April, next year.

Another Hospital.

Plans and specifications for a new hospital have been approved and accepted by the Marion County (Fla.) Hospital Association.

The hospital will be erected on the lot owned by the association in Ocala. The building will be constructed along modern lines, and will be complete in every department. There will be separate departments for the colored patients, and the operating room, which will be located on the second floor, will be fitted with every modern appliance.

The cost of the building, according to the plans, is estimated at \$8,000. The new hospital, which has been agitated for several years by a number of citizens, is now assured, and the work on same will commence very soon.

Presbyterian Hospital, Atlanta.

The entire Presbyterian Church of the State of Georgia has become so interested in the welfare and development of the Presbyterian Hospital in Atlanta that this institution now has the very brightest prospects. It is said that there is a proposal to add to the hospital a training school for medical missionaries and that this will be an important part of the work of the institution in the future. A thoroughly modern, up-to-date hospital building will be built, and those most interested in the work now believe that the interest not only of the synod of Georgia will be enlisted, but that the general assembly of the Southern Presbyterian church will no doubt indorse the institution, and give it valuable aid in the future, as this will afford for the church an excellent opportunity of establishing a training school for Christian workers, and especially for medical missionaries.

Birmingham Medical College Closes.

The commencement exercises of the Birmingham Medical College were held on the evening of April 18. The degrees were conferred by Dr. Wyman, dean of the college. The charge to the graduating class was delivered by Dr. E. P. Hogan, while Dr. George L. McWhorter, of Riverton, Ala., member of the legislature, delivered the annual address.

The list of graduates follows:

John Clifton Anthony, Alabama; Nolan Ray Currie, Mississippi; Reuel Cleveland Cleere, Alabama; James Robert Chandler, Alabama; Clifton Edward Clayton, Alabama; John William Black, England; James Calvin Baskin, Louisiana; William Madison Dismore, Alabama; Edward Walters Gray, Alabama; Robert Lee Hill, Alabama; James Henry Hill, Alabama; Farley Wingfield Harris, Alabama; Isaac Newton Jones, Georgia; James Franklin Johnston, Alabama; Lewis Alexander Kilpatrick, Alabama; John Ransom Knight, Texas; William Owen Lawrence, Alabama; William Jefferson Lovett, Alabama; William Algeron Lavender, Alabama; Edwain Ward Mackey, Mississippi; Thomas Scott McDiarmid, Alabama; Charles Clemon Shell, Alabama; James Webster Snow, Alabama; Milliard LaFayette Stephens, Alabama; Cleybourne Russelle Whitman, Alabama; Arthur Marion White, Alabama.

Chattanooga Medical College Closes.

The Chattanooga Medical College closed its twentieth session with brilliant exercises on April 26. Dr. J. R. Rathmell, Dean of the College, introduced the speakers of the evening. Prayer was offered by Rev. H.

W. Warren, after which Dr. Rathmell delivered an introductory address, telling of the advances which the college has made during its twenty years of existence. He paid a high tribute to the members of the graduating class, declaring them to be the best students the institution had ever sent out into the medical profession.

Hon. George W. Ochs, publisher of the Philadelphia Public Ledger, delivered the commencement address. Rev. A. B. Riker, of Moundsville, W. Va., spoke on "The Modern Idea of the Necessity of Scholastic Preparation for Entering the Professions."

The valedictory address was delivered by E. O. Depew, of Tennessee.

The list of graduates was called by Dr. A. B. Woolher, and Dr. J. H. Race, president of the University of Chattanooga, conferred the degree of M. D. upon each member of the class. Those receiving diplomas were as follows:

D. L. Adams, Virginia; W. T. Allen, Alabama; W. M. Bright, Tennessee; S. T. Brumley, Tennessee; P. C. Chadwick, Alabama; W. T. Cheney, Tennessee; E. O. Depew, Tennessee; E. E. DeLaperriere, Georgia; J. H. Germany, Georgia; S. P. Gardner, Virginia; J. S. Holt, Tennessee; B. C. Hale, Georgia; J. D. Leonard, Tennessee; J. S. Miller, Alabama; W. W. Mitchell, Texas; G. W. McGowan, Mississippi; J. A. Partridge, New York; W. C. Perrow, Virginia; H. G. Smith, Georgia; B. F. Start, Georgia; B. I. Vann, Tennessee; G. W. Willis, Alabama; E. J. Whitcomb, North Carolina, and C. B. Bailey, West Virginia.

At the close of the commencement exercises the members of the graduating class were tendered a reception by Dr. J. B. Steele in his office in the Loveman building. Later they attended a banquet at the Read house, given by the college alumni.

Commencement of Atlanta College of Physicians and Surgeons.

The fifty-fourth annual commencement of the Atlanta College of Physicians and Surgeons occurred during the last week in April. The graduating exercises were held in the Grand Opera House, Atlanta, on the evening of the 29th. The classes from the medical and dental departments were about equal—and together compose one of the largest and most representative ever sent out from this famous seat of learning. The following list gives the names of the young men who received the degree of M. D.:

H. M. Seymour Adams, Georgia; G. Marvin Anderson, Georgia; Dovid P. Belcher, Oklahoma; John A. Burch, Georgia; Lemuel A. Carter, Georgia; I. Wayne Chandler, Georgia; Augustus B. Colvin, Georgia; P.

H. DeLoach, Georgia; W. Smeltzer Derick, Mississippi; O. F. Elder, Georgia; George M. Floyd, Alabama; Lewis Hilson, Alabama; Frederick C. A. Kellam, Virginia; Charley A. Kelley, Georgia; Marvin B. Ketron, Georgia; Jaquelin E. Knight, Georgia; Joseph E. Lane, Georgia; Wales W. Lewis, Georgia; Willie R. Lowe, Georgia; Albert B. Mason, Georgia; B. Harvey Minchew, Georgia; Leon R. McCrummen, Georgia; Marvin W. McLarty, Georgia; John M. McMillan, North Carolina; William H. Owens, Alabama. Peter Clark Quarterman, Georgia; Garnett W. Quillian, Georgia; Herbert L. Reynolds, Georgia; Holbert A. Rogers, Georgia; Charles L. Root, Texas; William Rowlette, Jr., Florida; James I. Simmons, Georgia; John R. Smith, Georgia; William R. Thomas, Georgia; Oscar L. A. Torbett, Texas; T. DeWitt Warren, Alabama; B. Leland Whitten, Georgia.

Commencement, North Carolina Medical College.

The North Carolina Medical College has just closed a most successful year with the annual commencement exercises which were held in the Academy of Music in Charlotte, April 26th. The baccalaureate sermon by Rev. Detwiler, D. D., was delivered before the graduating class Sunday, April 25, at the Tryon Street Methodist church. On Monday evening a large number of the friends of the college and graduating class witnessed the closing exercises and listened to a most instructive address by one of the old North State's most gifted physicians.

The exercises were opened with prayer by Rev. W. M. Kincaid, D. D., pastor of the First Presbyterian church.

Dr. L. B. McBrayer, of Asheville, was introduced by the Dean, Dr. W. O. Nisbet. The orator's reputation needs little comment and few words of praise at our hands. A member of the State Board of Medical Examiners, he has long been prominent in the State Medical Society. His speech proved that he is not only a physician of wide knowledge and skill, but a thinker and a master of the English language quite as truly. We are able to quote only sparingly from his words, every sentence of which is well worth while. Among other things he said:

"Every one who enters upon our noble profession owes it to himself and his conferees to be a success. And I do not use the word in the latter day acceptation of the term, from a financial standpoint, only; though I would not have you believe for a moment that I decry this standard altogether. It is my opinion, after mature deliberation, that the doctor is paid less, in

proportion to the service rendered, than any other man, be he laborer, artisan or professional man; for who can measure the value of the human life?"

"Success is a relative term and it has been truthfully said that there is a dignity in mediocrity as well as a dignity of greatness and the best doctor is often one of whom the public hears least. Each member of this graduating class has but one chance in one hundred thousand to become the greatest physician in the United States; and but one chance in two thousand to become the leading physician in this grand old State, but each one of you has one chance in one anywhere to attain the happiest and most useful lot given to man; that is to be a vigorous, whole-souled, intelligent, up-to-date physician."

The keynote of a physician's success, the speaker believed, is loyalty—loyalty to his profession, to his patient and to himself.

He paid an eloquent tribute to the greatness of the work of the medical profession, picturing the physician here and there in the most excruciating and critical moments, preserving and lengthening human life and ameliorating human suffering.

In closing he said:

"After all we cannot fail to realize that we are constantly fighting a foe that must sooner or later according to the immutable laws of nature, come out victorious. From the edict, 'All that is born must die, all must submit to the dominion of death,' there is no appeal—and after a little while they will say of each member of this graduating class, of each member of our profession, as they did of the great physician—'He saved others, himself he cannot save.' And when the day of capitulation shall arrive, when that inevitable hour shall have come, may a certain grim adversary recognize a noble foe and gently deal with the doctor."

Dr. J. P. Munroe, president of the college, then conferred the degree of Doctor of Medicine upon the following graduates: Messrs. S. L. Autry, F. L. Brown, H. H. Cauble, G. W. Choate, F. R. Cranford, T. D. Crouch, N. D. McArten, H. W. McKay, B. G. Team, C. M. Lentz, G. H. Croom, D. A. Humphrey, H. B. Malone, R. C. Miller, O. W. Shellem, R. G. Tuttle, R. C. Rosser.

The president announced that the highest grade was made by H. W. McKay, and that the second place was won by H. G. Rosser. The Davidson College Orchestra furnished the music for the occasion.

After the diplomas were all presented, the faculty, the graduating class, marshals, members of the Mecklenburg County Medical Society, and visiting doctors partici-

pated in a most delightful informal smoker at the Manufacturers' Club rooms.

A Children's Hospital in Augusta, Ga., is to be erected by Mrs. G. F. W. Duff, of New York, in memory of her husband, who died in Augusta recently. The building will cost approximately \$20,000.

The Board of Medical Examiners of Oklahoma has taken a most decided and radical step towards eliminating physicians who are suffering with tuberculosis. In the future license will be refused to applicants who are so diseased. This doubtless will be a considerable hardship to many who consider a change of climate essential to their well-being, but there can be no doubt that such a rule is right and proper. Yet who is it that is not moved with pity by the spectacle of a man racked with disease, but who for the sake of those dependent upon him must continue to work and to fight?

The management of the Robert Bruce McDaniel Memorial Hospital, of Kinston, N. C., a modern, thoroughly equipped and up-to-date institution which is under the exclusive control of Drs. James and W. T. Parrott, has begun the publication of a bi-monthly bulletin the first number of which has come into our hands. This bulletin includes a report of "One Hundred Consecutive Operations" by J. M. Parrott, M. D.; an article on "The General Management of Fever" by W. T. Parrott, M. D., and some notes on "Diet in Fever" by the Directress of Nurses, by Miss Iola Temple. Dr. J. M. Parrott is confining his work to diseases of the eye, ear, nose and throat, and general surgery; Dr. W. T. Parrott devotes his attention to internal medicine.

The commencement exercise of the South Carolina Medical College (Charleston) were held during the last week in April, Rev. W. W. Memminger delivered the baccalaureate sermon at St. Paul's Episcopal church Sunday night, the 25th.

The commencement exercises took place at the Academy of Music on Wednesday night, April 28th, when Senator E. D. Smith delivered the address to the graduates Dr. Robert Wilson, dean of the faculty, presided over the exercises. The degree of M. D., was conferred upon a large number of worthy young men.

Dr. J. Martin Posey, of Dade City, Fla., who was recently convicted for an assault, with intent to kill R. A. Ellis, was sen-

tenced to the penitentiary April 15, to serve five years.

It is reported that Mrs. G. F. Duff, 87 Riverside Drive, New York, is to build a \$20,000 child's hospital in Augusta, Ga., as a memorial to her husband, W. H. Duff, who died in Augusta March 19, 1909.

The Children's Hospital Association of Augusta will equip and operate the new hospital.

The Church Hill Medical Society met at the Chimborazo Sanatorium, Richmond, Va., April 7th, at 8:30 o'clock. Drs. Levy and Woodson addressed the society. The addresses were followed by a smoker.

Marriages.

Dr. Nathaniel T. Dulaney, Sr., of Blountville, Tenn., and Miss Mary Emma Gammon, of Bristol, Tenn., were married at the home of the bride's brother, Dr. E. H. Gammon, of Bristol, Tenn., April 8th. Immediately after the ceremony, which was performed in the presence of many of the relatives and friends of the contracting parties, Dr. and Mrs. Dulaney left for their future home in Blountville, where Dr. Dulaney has, for a long time, been engaged in the practice of his profession. Dr. Dulaney graduated from Jefferson Medical College, Philadelphia, Pa., class of 1856.

Dr. M. S. McCobb, of Duncan, Okla., was quietly married to Miss Ruth Simon-ton, at the home of the bride's parents in Jackson, Miss., April 1st. Just after the ceremony Dr. and Mrs. McCobb left for their home in Duncan.

Deaths.

Dr. W. K. Gatewood, of Virginia, died in Marion, S. C., at 8 o'clock on the morning of March the 8th. Dr. Gatewood had been in bad health for some time, and his death was not unexpected.

He was 73 years old, and was one of the most prominent physicians of Virginia before he died. After he gave up his practice in Virginia, he made his home with his daughter in Marion.

Dr. C. L. Clawson died at his home in Richburg, S. C., on March 28th, after a serious illness of several weeks. Dr. Clawson was a native of Fort Mill township, in York county, S. C. He moved to Chester, S. C., in 1873, and was one of the most prominent physicians of that place until fifteen years ago, when he moved to Richburg, where he has been living since that time.

Dr. Henry Isaac Jones, a veteran surgeon of the Confederate and British service, died at his home in Oakland, California, on March 9th. He had been practicing his profession in that city for twenty years.

Dr. Jones was a native of Wales, and received his medical education at Glasgow. Soon after his graduation he accepted the position of assistant surgeon of the Confederate Cruiser, Florida.

After the close of the Civil War he entered the service of the British Army, and was stationed in India. Afterward he returned to the United States, and practiced in Connecticut and Pennsylvania until his removal to Oakland twenty years ago.

Dr. J. Schmittle died at his home in Magazine Street, New Orleans, La., on March 6th. Disease of the pancreas, which attacked him several months ago, was the cause of his death.

He was a native of Grossherzogthum, Hessen, Germany, and sprang from a family of prominent educators in his native land. He graduated from the New Orleans School of Medicine in 1862. Since the time of his graduation he has practiced his profession in the city of New Orleans, where he made great success, and was one of the most noted physicians. He was 80 years of age when he died.

Dr. W. H. Bryan, of Rossville, Tenn., was killed by a street car late in the evening of March 3rd. Dr. Bryan was one of the best known physicians in the South, and his death is a source of great sorrow to his many friends. He was 58 years old.

The funeral and interment took place at Tasso, Tenn., on March 5th.

Dr. J. W. Bennett, the dean of the medical profession in Brookhaven, Miss., died on the morning of March 14th. He was 81 years old when the end came. Dr. Bennett graduated from Tulane University of Louisiana, New Orleans, La., in 1859.

Dr. Harrison A. Winters, of Chattanooga, Tenn., died in Erlanger Hospital on March 15th, from the effects of a broken leg, and four subsequent operations.

On the night of January 18th, Dr. Winters was driving, and upon turning a corner was run into by a delivery wagon. His buggy was upset, and the horse attached to it stepped on him. His leg was broken near the hip. On account of the fractured parts not knitting together, it was found necessary to operate on the wound four times, the last operation being long and painful, he never revived from the influence of the ether.

Dr. Winters was born in Morris, Ill., in

February, 1854. In 1875 he moved to Chattanooga. Four years later he entered Rush Medical College, of Chicago, graduated and practiced his profession there for several years, and then returned to Chattanooga and practiced medicine for fifteen years.

Dr. James Clinton Field, one of the most prominent and esteemed physicians of Americus, Ga., died in the Macon Hospital April 7th, after a protracted illness.

He was reared in Kentucky, but had lived in southwestern Georgia, at Oglethorpe and Americus, for the last twenty years. Dr. Field graduated from Louisville Medical College, Louisville, Ky., in 1882.

Dr. J. B. Terry, formerly of Canton, Miss., died at Long Beach April 17th. His remains were shipped to Canton for interment.

Dr. W. W. Payne, one of the best known physicians of East Mississippi, died at his home in Meridian April 16th, after an illness covering more than a year. About three years ago Dr. Payne was severely injured in the yards of the Mobile and Ohio railroad, and remained partially paralyzed until last summer, when he was compelled to take his bed.

Dr. J. C. Keaton, of Quincy, Fla., was shot at five times by J. S. Shaw on April 27th. Three of the bullets took effect. While Dr. Keaton is seriously injured, it is thought that he will recover.

Dr. Samuel Marshall Orr, of Anderson, S. C., died at Johns Hopkins Hospital, Baltimore, Md., April 15th. His death was no surprise to his many friends, as he had been in declining health for quite a while.

Dr. Orr had always lived in Anderson, where he was for a long time a most prominent and successful physician. He began the study of medicine under the late Dr. W. H. Nardin, and graduated from the Jefferson Medical College, Philadelphia, Pa., in March, 1879. He then returned to Anderson, and practiced medicine for twenty-five years in co-partnership with his former preceptor, Dr. Nardin. Dr. Orr was president of the Anderson County Medical Association, member and delegate of the American Medical Association, and surgeon for the Charleston & Western Carolina, and the Blue Ridge railway companies.

Dr. Orr was not only active in the practice of his profession, but also in the commercial and financial affairs of his city, and did much for the upbuilding of Anderson.

Dr. Rosa Mounish, of Atlanta, Ga., an hour after being sentenced to serve two years in the Federal prison at Leavenworth,

Kan.; drank prussic acid, and died April 19th.

Dr. Robert Field, of Hattiesburg, Miss., died suddenly at his home March 17th. He had been slightly ill for several days, but was improving, and was thought to be doing well.

Early in his professional life, Dr. Field located at Pochontas, Miss., where he practiced his profession with great success for a long time. Several years ago he moved to Hattiesburg, and since that time has lived a very quiet life, having retired from the practice of medicine.

Dr. A. D. Scruggs, of Knoxville, Tenn., a prominent and wealthy physician, died at his home on April 10th. He was sixty-seven years old. Dr. Scruggs graduated from the Jefferson Medical College, Philadelphia, Pa., in 1867.

Dr. C. A. Landrum, one of the most prominent physicians of Florida, died at his home in DeFuniak April 23rd. Dr. Landrum graduated from the Medical Department of Tulane University of La., in 1876.

Dr. J. W. Bryant, who had been surgeon for the Norfolk & Western Railway for some time, died in Crewe, Va., April 13th. Dr. Bryant graduated from the Medical College of Virginia, Richmond, Va., in 1875.

Dr. T. C. Ware, one of the oldest citizens of Clarksville, Va., died at his residence April 4th. He was eighty-four years old.

Review of Southern Medical Literature

New Orleans Medical and Surgical Journal, March, 1909.

Plague from the Standpoint of the Sanitarian.—Dr. J. H. White believes that the best research indicates that the vast majority of all cases of plague are transmitted through the agency of the rat flea, except a very small number by direct contact to mucous membranes, from pneumonic exhalations, and by contact of abraded surfaces with infected material. The scientific demonstration of food infection stands, but the practical probability of so infecting a man is rather dubiously proven.

Now, the rat harbors the flea and the flea infects the rat, which in turn infects other fleas to bite man and infect him also. *Ergo*: If we can watch our rats closely enough to know when the infection begins with them, we need not let it reach man except in the rarest cases, since it is a fact that rats first begin to sicken, and man

escondarily. Heiser tells us that he found this the unbroken rule in Manila.

An epidemic among rats often results in migration of the rodents, thus carrying the disease into fresh soil, or, if they remain in the same place, they seem to acquire a sort of chronic or subacute form of the disease unknown to man, and during this period the disease will slow down or apparently die out, and then, upon the advent of fresh material (perhaps) from some other rat colony or from the breeding (perhaps) of young rats, the virus is revived (just as Dunbar attenuated or made virulent his cholera vibriones) and we have a fresh exacerbation of epidemic. Note that in India

1904 showed 1,000,000 deaths;

1905 showed 950,000 deaths;

1906 showed 330,000 deaths;

1907 showed 1,250,000 deaths.

Delayed Union, Non-Union and Vicious Union in Fracture of the Leg.

—Dr. C. Wallen says that in all of these resections the normal position of the limb must not be lost sight of and the relative positions of the various bony prominences must be constantly kept in mind and frequently compared. The bones must next be replaced in the periosteal sheath. The use of the various retentive measures, such as bone ferules, pins, screws, nails, wiring and clamps are *entirely superfluous*, and when used are likely to work harm and defeat the very object for which they were intended; in rare cases where anything is necessary, drilling the bone and using some absorbable animal material, such as kangaroo tendon or cat gut is much to be preferred, care being taken not to tie it too tight, but allow some little play. Absorbable mechanical appliances, such as aluminum intermedullary splints may sometimes be used to advantage.

Gaillard's Southern Medicine, Feb., 1909.

Surgical Tuberculosis with Especial Reference to the Use of Tuberculin in Diagnosis and Treatment.

—Dr. R. T. Taylor thus summarizes his paper:

1. The X-ray is by all odds the best aid to the clinical diagnosis of tubercular bone disease.

2. The subcutaneous injection of large doses of tuberculin (one to five milligrams) in children is to be condemned for diagnosis as unnecessary with the other means at our disposal, because harmful and possibly dangerous. Syphilis and leprosy also respond to these large doses.

3. Conjunctival or ophthalmo-tuberculin may cause corneal ulcers and serious eye inflammation in 2 per cent. of the cases, and is, therefore, not to be used from

choice.

4. The Von Pirquet skin reaction is quite reliable, safe and valuable, especially in conjunction with the clinical symptoms and the X-ray in children.

5. Tuberculin T. R. in doses of from 1-1000 to 1-500 mgm. and the fresh air treatment should be used as a routine in all tubercular bone and joint cases in an endeavor to immunize the patient.

6. Thorough fixation traction in all acute cases, and in the spine, hyperextension in addition, are of the greatest importance in treating the local disease.

7. Bier's hyperemia and Beck's bismuth paste are valuable additions and adjuvants to treatment.

8. Tuberculous secondary abscesses should not be opened unless there is some decided reason therefor, and, if opened, should be immediately sutured tight after the pus is evacuated. Otherwise a secondarily infected sinus will surely result with its train of unfavorable symptoms.

9. Operations on the tubercular joints of children should be avoided, if possible; not so with adults.

What is the Maximum Dose of Iodide of Potash?—Dr. A. G. Hobbs says that it is now generally conceded that aolin and salines are antidotal to iodism, especially if the symptoms are most pronounced in the enteric and duodenal region as a result of too large doses of iodide of potash. This would indicate that the dose used was larger than necessary to neutralize the mild inoculation, or, possibly, prove a wrong diagnosis. This salt would then seem to be a test—a gauge almost, to estimate the virus quantitatively. We must also remember that pseudo-syphilis is not a myth—some have been damned both mentally and morally by such a mistaken diagnosis.

As "the proof of the pudding is in the eating," so the amount of the salt that the patient can neutralize, and fatten on, and improve upon, is a measure of his infection.

In a fulminating, virulent, gummatous condition, often on a mucous membrane, but especially if on the iris, the daily dose of iodide of potash is not to be measured by grains, but by the results. Eight to sixteen ounces of sweet milk should be given with each large dose, as an accipient and as a neutrinant.

In such cases as iritic glyoma, the danger is either blindness or over-iodism. Risk the latter; it is easier to overcome than iritic synechia. 'Tis true, we are "between the devil and the deep blue sea," but some of us can swim better than we can scrap with his satanic majesty.

The Southern Practitioner, March, 1909.

Autobiographical Report of a Case of Trigeminal Neuralgia.—Dr. W. H. Bum-pus says in regard to treatment that the aim of the injection is to reach the nerve involved as near its exit from the cranium as possible and to deposit the alcohol in its region. The success of the treatment seems to depend on attaining the nerve or at least its immediate proximity. One can easily tell when the needle has reached the right spot by the sensation of the patient. Pain is complained of in the area of distribution of the nerve. After a few drops of the solution have been injected the pain is followed by a numbness and deadening of this area.

The needle adopted for my use is the needle made for lumbar puncture. He has blunted the point of this needle somewhat with a file to take off the cutting edge, in order to lessen the danger of puncturing an artery.

With regard to the dangers attending the injections, none of any importance have been reported. On three different occasions, on attempting to inject the second branch of the nerve, the writer has entered the orbit through the sphenoidal fissure and deposited the alcohol in the back part of the orbit. One knows immediately when this accident occurs by the pain complained of in the eye of the patient and also by the lack of resistance to the injection of the alcohol. The consequences resulting to the patients from this accident were ecchymosis and swelling of both the upper and lower eye-lids, with double vision for several days. The pulse of a patient as a rule is stronger at the completion of the injection than at the beginning. In cases of severe pain the author has repeated the injection in a number of cases on the next day when the first injection was a failure. When there is no urgency it is better to allow several days to intervene between injections. The solution used is an 80 or 90 per cent. solution of alcohol containing one grain of cocaine to the ounce. — c.c. of this solution is used for one injection.

Cholelithiasis.—Dr. E. C. DeMoss thus quotes Murphy's Test for this condition:

The patient, all clothing being removed from the lower chest and abdomen, is placed, sitting with back to the examiner, who sitting behind, places both hands on the abdomen immediately below the costal margins; the patient bends forward, placing his hands on his knees. He is instructed to breathe rapidly; at each expiration the examiner's hands sink deeply in, but they rotate in on their axes, so that soon the ulnar edges lie more deeply than the radial,

and the tactile surface of the fingers is directed upwards. Very soon the hands begin to approach the under surface of the stomach on the left, and of the liver on the right; and as soon as the tender gall bladder comes under the influence of the compressing right hand, during inspiration, which forces the liver downward, pain is experienced, and the act of respiration is abruptly checked, the pain being definitely referred to the area covered by the right hand." He also states that tenderness of the bile channels on pressure is the one inevitable symptom which must always be present, and this tenderness is not only to be found during an attack, but persists afterwards and can always be elicited by pressure properly applied.

Richmond Journal of Practice, Feb., 1909.

Causes and Treatment of Non-Union in Fractures.

—Dr. T. H. Wagner says that there are several fractures where it is advisable to cut down upon at once and wire, viz.: Fracture of the patella, or where there is marked displacement, making reduction and immobilization difficult; also in cases where there is considerable laceration of muscle and fascia, for fear of the interposition of soft parts, and hence delayed union. Should it be a case of several months' standing with no union, or very slight union, open down upon the fracture, remove all atrophied or spongy bone, strip back the periosteum, but save it, and bring the bones together, pass your wire through and through, and after tightening it cut the ends as short as possible and bury the ends, suturing the periosteum over all. We too often neglect the general health of the patient. It is often difficult to get the family history, so it is wise to push potassium iodide quite vigorously. Anæmia is often a cause, or contributing cause, of delayed or non-union. Urine should be examined for glycosuria, either for pre-existing or traumatic. If found, should be treated in the regular way. If infection be present, free incision and drainage should be made under local anæsthesia.

Journal-Record of Medicine, February, 1909.

Blood in the Urine.—Dr. A. L. Fowler believes that blood appears in the urine as the result of several distinct and separate affections of the uro-genital tract. As examples:

1. External trauma (a blow from without) may so damage the kidney, the prostate, the testicles or the penis sufficiently to cause hemorrhage of these organs which subsequently finds its way into the urine. Internal trauma to the uro-genital mem-

brane such as the passage of the renal calculus, the movements of a large vesical calculus, clumsy instrumentation in catheterization or cystoscopy on the part of a neophyte, may also give rise to it.

2. Local diseases, such as acute Bright's, cancer, sarcoma, parasitic diseases, such as *Bilharzia haematobia* and particularly gonorrhea and tuberculosis; drugs, benign villous tumors, hy-

3. Constitutional or circulatory diseases dependent on depravity or disorganization of the blood, such as pernicious malaria, scorbutus, purpura hemorrhagica, typhus fever and syphilis.

4. Vaso-motor disturbances to the sympathetic system—persistent active hyperæmia and, very rarely, passive congestion concomitant to obstructive cardiac lesion.

Gaillard's Southern Medicine, March, 1909.

Gonorrheal Vesiculitis.—Dr. W. E. Fitch says that gonorrheal infection of the seminal vesicles was first pointed out by Velpeau in 1836, and many careful observers have since confirmed his findings through autopsies. Kocher and others incised the seminal vesicles through the rectum, but it was Lloyd who called attention to the frequent occurrence of pyo-vesiculitis and advised incision of the organ for the relief of those cases which could not be "stripped." It remained for Dittel, the father of perineal prostatectomy, to devise an incision for exposing an abscess of the seminal vesicle. Later Fuller modified Dittel's operation and in 1905 reported thirty or more cases in which he opened the seminal vesicles for suppuration. The intimate functional relation between the seminal ducts and the bladder function has been amply proven by the relief of vesicle tenesmus and retention of urine in cases of supposed prostatic enlargement, which can often be relieved by stripping and vibratory massage. The author has often seen the partial retention of urine, so common in the subjects of gonorrheal vesiculitis, disappear as this infection was cured by "stripping" of the seminal vesicles and irrigation of the bladder.

The Southern Clinic, March, 1909.

Thirty Years Observation in Tuberculosis.—By Dr. C. A. Bryce.

The American Practitioner and News, March, 1909.

Baldness.—Dr. M. L. Ravitch believes that the laity and the medical profession at large have not given this subject the thought and care that it deserves; and while immense strides are being made in sanitation and

prevention of disease in general, the prevention of infectious diseases of the skin and scalp has been woefully neglected. The only true septic barber shop was seen by the author in London five years ago. It was kept by a German by the name of Stahl. There a comb and a brush were never used a second time until it had been thoroughly washed and sterilized. Baskets of freshly washed combs and brushes, looking at a little distance like a heap of freshly cut straw, were brought in at intervals throughout the day. The towels used were heated over horizontal cylinders of bright copper within reach of the barber. In such kind of barber shops you do not have any fear of infection.

Diagnosis of Pulmonary Tuberculosis.

—Dr. S. W. Rembert points out that the aid of tuberculin in clearing up the diagnosis is often of the greatest value. The form in which it is most accurate is the subcutaneous method, but such careful technic is required to properly make the dilutions that it is not sufficiently safe to be used by one not having had already a considerable experience in its use. The ophthalmic method has been championed by some authorities, but on account of some of the dangers to which its use has led in some cases, it is growing into disfavor. Probably the best for general use is the cutaneous method, as suggested by Von Pirquet. It is easily administered, and is safe in the hands of even the most inexperienced, where the ordinary rules of asepsis are followed.

A positive reaction from any test, uncoupled with symptoms or physical signs, is insufficient evidence on which to make a positive diagnosis of tuberculosis! The cutaneous method is of great assistance in locating cases of tuberculosis in schools, asylums, etc. Again, it can be administered in suspicious cases that cannot remain away from work sufficiently long, or have not the proper conditions of home life that will permit them being given the subcutaneous test.

How the Public Can Help the Medical Profession to Fight Disease.—By Dr. G. M. Linthicum.

Texas Medical Journal, March, 1909.

A Mediocrity Up-to-Date.—Dr. H. K. Leake believes that science may harness the electrical current for its uses and confine the vaporous elements of steam to expand the comforts and pleasures of life, but "It cannot make a buttercup," nor form in the brain of the man of science and of art the seed that grows the skill and power to conceive and execute. It is labor that pre-

serves and develops the seed that supplies the intellectual plasm, nay! the life unit itself of man; but this labor, in ancient times, was mediocrity, *not* up-to-date. The expert labor of the modern artisan and agriculturist is paralleled by that of the modern physician and surgeon; it is mediocrity up-to-date in its wide dissemination and efficiency. It was up-to-date mediocrity, newborn and transmitted, that swept away the feudalism and clerical tyranny of the Middle Ages, and that later, in France and America, engaged in revolution to promote a growing sense of man's rightful claim to civic and religious freedom.

The Southern Medical Journal, March, 1909.

False Aneurysm of the Femoral Artery Following Typhoid Fever.—Dr. R. S.

Catcart after reviewing the history of the case in detail says that complications of the arterial system in typhoid fever are not common. The cause of the complete destruction of the femoral artery in this case, I believe, was due to an ulcerative arteritis produced by the localization of the typhoid bacilli in the walls of the vessel. That the circulation in the leg was not interrupted is explained by the formation, primarily, of an autochthonous parietal thrombus, which as it increased in size, the blood current channelled. Neither the patient nor his physician noticed symptoms of thrombus or embolus. There was, and had been no swelling of the limb beside the tumor in Scarpa's triangle and no evidence of gangrene.

That the typhoid bacillus penetrates and localizes itself in the arterial walls has been demonstrated by several writers. Dr. W. W. Keen, in his book on "The Surgical Complications and Sequels of Typhoid Fever," quotes Rattone as reporting four cases in which he was able to obtain pure cultures of the typhoid bacillus from sections of the arterial tunics.

Elephantiasis of the Male Genitalia.—

Dr. J. N. Baker in discussing the cause of this disease points out that the singular feature in the life of the embryo is what is termed the "filarial periodicity."

If under ordinary conditions of health and habit, the blood be examined during the day, the parasite is rarely seen. It will be found, however, as evening approaches, the filariæ begin to enter the peripheral circulation in increasing numbers. Manson estimates that from forty to fifty million are simultaneously circulating in the blood vessels. After midnight the number begins to gradually decrease, and by eight or nine o'clock in the morning they have practically disappeared from the peripheral circu-

lation. As Mackenzie has pointed out, reverse the habits of a filarial patient and the periodicity is reversed. For this periodicity no reasonable explanation has, as yet, been given, but it is manifest that the periodicity is an adaptation of the habits of the parasite to the nocturnal habits of the mosquito. During the temporary absence from the cutaneous circulation, Manson demonstrated that the filaria retired principally to the larger arteries of the lungs.

Cancer of the Parotid Gland.—Dr. G. A. Hendon believes that the mixed tumors of the salivary glands run a clinical course strikingly different from the sarcomata and carcinomata in that they are slow growing and generally benign. The regional lymph nodes are not invaded and recurrences are likely to remain local in a considerable proportion of the cases.

Diagnosis.—To avoid serious error in diagnosis one has only to remember the ordinary inflammatory reactions to which the parotid gland is prone. The history of the swelling will furnish sufficient evidence of its clinical character. The writer recalls a memorable case of suppuration in the parotid which was traceable to the lodgment of a fragment of a chestnut hull eight months before.

Some Rare Forms of Hematoma.—Dr. J. G. Sherrill offers the following hypotheses as possibilities in explanation of this condition:

1. That the blood might flow through a sac returning into the vessel, and remain fluid, at least in part, just as is the case in aneurysm.
2. That the cellular tissues possess the power of secreting a substance which tends to prevent coagulation.
3. That slight infection, present in insufficient amount to produce suppuration, results in such change that the blood cannot be taken up by the absorbent vessels.
4. That the tissues about an hematoma might be so dense or so compressed that the absorbent vessels would be occluded or obliterated, thus preventing the accomplishment of their normal functions.
5. That coagulation does take place, but when disintegration occurs the blood remains fluid but not absorbable.
6. That the constant escape of fresh blood occurs in a quantity sufficient to more than make up for the loss in volume from absorption.

Virginia Medical Semi-Monthly, March 12th, 1909.

Neurasthenia.—Dr. J. N. Upshur says that many drugs have been used for the re-

lief and cure of this affection, such as all of the bromides, singly and combined, preparations of phosphorus, in the form of the compound phosphorus pill, and zinc phosphide, sunbul, arsenic, assafoetida. In sexual neurasthenia strychnine, iron, cornutina, damiana, valerian—in fine, it would be unnecessary for me to recite the whole armentarium of therapeutics. It is, however, important to vary the drugs from time to time, as indications point out, and as tolerance of the one being exhibited seems to be established. Some clinicians object to iron, but while some cases may not be benefitted by it, yet it may be important in others. When anaemia is present it will prove beneficial, given in such form as can be most easily assimilated. The mineral acids, combined with strychnia and one of the bitter tonics are very useful. Alcohol, tea, coffee, and tobacco should be prohibited.

Remarks on the Treatment of Whooping-Cough.—Dr. S. Harnsberger says that many years ago Nothnagel proved by experimenting upon animals that irritation of the tracheal and bronchial mucous membranes causes coughing; and found that at the bifurcation of the trachea in particular coughing fits may be excited as promptly and of as severe a character as those originating in the larynx. The adhesive secretion—that tough mucus, the accumulation of which provokes the attack, and the ejection of which ends it—is, in the absence of specific treatment, the point that should concern us most. Every coughing spell is a new source of irritation to the mucous membrane of the larynx. All causes of excitement should be studiously avoided. Prophylaxis here, as elsewhere, should receive prompt attention. Whenever the patient manifests any symptom of illness whatever between the paroxysms, he should be carefully examined and watched for some complication. Sound sleep is nature's perfect restorative. Sound sleep diminishes the number of paroxysms, and as complications are, as a rule, in direct ratio to the number and severity of the paroxysms, sleep is at one and the same time prophylactic and curative. Make your patient sleep, and right here are bromides and chloral specially useful. Give full doses.

Virginia Medical Semi-Monthly, March 26th, 1909.

Cancer of the Liver.—Dr. O. F. Blankingship believes that, as a rule, cancer of the liver is associated with progressive enlargement; but sometimes cirrhotic cases occur in which there is no enlargement. Gastric disturbance, loss of appetite, nausea

and vomiting are frequent symptoms. Progressive loss of strength and flesh may be early noticed. Pain or a sensation of weariness in the right hypochondriac region is usually present. Jaundice occurs in about half the cases, but is generally of only moderate degree. Ascites is rare; superficial veins are enlarged. The abdominal tumor moves up and down with respiration. Spleen is rarely involved. Pyrexia is present in some cases, in which there is usually a continuous fever of 100 or more degrees. Oedema of the legs (due to anemia) is usually late in the disease, and then there is the usual cancerous cachexia.

The enlargement of the liver is often the first sign of serious disease. It often attains immense size, sometimes weighing as much as twenty-five pounds. Usually, as the nodular type is the most frequent, nodules can be felt on palpation. Pain is usually a very prominent symptom. It may be dull, boring in character, or sharp and cutting—radiating to the shoulder, back and loins.

Surgery of the Bile Tract.—Dr. J. E. Canaday says that the indications for gall stone operations are:

1. Presence of any symptoms seriously interfering with patient's mode of life.
2. All cases in which medical treatment has failed.
3. Acute suppurative cholecystitis or cholangitis.
4. Acute suppurative chronic obstruction of the cystic duct.
5. Persistence of acute obstruction of the common duct.
6. All cases of calculus, save possibly acute obstruction of the common duct.
7. Perforation; and,
8. Cases in which there is a suspicion of primary carcinoma of gall bladder.

Operation is contraindicated in:

1. Acute obstruction of the common or hepatic ducts, in the belief that the stone may pass through the common duct into the duodenum, and no others are present to produce a new attack. If fever, however, is associated, indicating suppurative cholangitis, operation should be performed with drainage of the hepatic duct.
2. Very old or stout individuals, or those suffering from diabetes, arteriosclerosis, cardiac, pulmonary or renal disease.
3. Extensive carcinoma of the biliary passages.

Abstracts of the Leading articles of the month.

Mellituria in Nurslings.—Romme ('La Presse Med.,') calls attention to a case reported by von Reuss of an infant, aged 3

months, brought to the hospital in a state of extreme atrophy, who died at the end of forty-eight hours. The urine contained not less than 1.2 per cent. of glucose, although nothing was given but tea with the addition of saccharine. At the autopsy there was atrophy of all the organs with brown atrophy of the liver; the pancreas seemed normal. This was a case of true glycosuria. Von Reuss states that any condition which prevents the normal metamorphosis of lactose will cause sugar to appear in the urine, and will show itself under the form of a lactosuria if the lactose is not split up in the intestine or under the form of galactosuria or glycosuria, if the products formed by the splitting up of the lactose do not undergo their ultimate physiological transformation. In fact, von Reuss has frequently found lactosuria in dyspeptic infants. In the great majority the quantity of lactose is never very large, and only in severe gastro-enteritis reaches a proportion of 1 per cent. Its origin is easy to explain; the intestinal mucous membrane, changed by the pathological process, of which it is the seat, lets part of the lactose pass entire. Thus lactosuria does not indicate the existence of a disturbance of general nutrition, but that of a local kind limited to the intestine, and in this respect it possesses a diagnostic value in the sense that, even in the absence of digestive disturbances clinically inappreciable; it indicates the existence of a chronic affection of the intestinal mucous membrane. Von Reuss is of opinion that lactosuria does not provoke any disturbance on its own account, and has never found acetone or diacetic acid in cases of lactosuria accompanied by phenomena of intoxication. The significance of galactosuria and glycosuria is entirely different, and indicates either a disturbance of general assimilation or of glycogenesis, *i. e.*, a lesion of the liver. He cites a case where it occurred in a child, aged 8 months, who had cirrhosis of the liver. Thus, the diagnostic and prognostic value of mellituria in nurslings depends on the kind of sugar found in the urine. This differentiation is rarely made, and it is possible that a good number of cases of cured diabetes in young children which have been published were cases of lactosuria or transient galactosuria.

Dressings of Horse-Serum in the Treatment of Burns.—Petit (La Presse Médicale) employs the following technique in children: The area adjacent to the burn is first thoroughly cleansed by boiled water, soap and brush. Bullæ are then opened antiseptically, the epidermis being preserved and the whole surface bathed with oxygenated water and then with sterilized saline solution of 10 per cent. The burnt

tissues are then covered with several layers of sterilized gauze soaked in warm horse-serum; over this two or three compresses of warm sterilized saline solution are placed and the whole covered with a piece of taffetas and wool. This dressing is changed at first every twenty-four hours, later every two days, the burn being well irrigated with warm saline solution. Later, after the slough have come away and the epidermis is softened under the moist dressing, the taffetas is left off and the circumference of the wound smeared with a little sterilized vaseline. Still later, when the granular surface is well raised, the liquid serum is replaced by dried serum which is dusted on the wound and covered with a dressing of sterilized saline solution. The effects of this dressing were very remarkable in the ten cases in which it was tried; cicatrization took place rapidly without any scarring in burns of the second degree. He says that in any given burn we do not know to what depth the tissues are destroyed; a large number of cells are not killed but stupefied by the action of the heat; if left to themselves, or still more, if hampered by antiseptics, they succumb and form further elements for toxic fermentation; if, on the other hand, they are kept in a physiological bath, they revive and can take part in the repair of the wound. The leucocytosis produced locally by the action of the serum leads to the same result. Certain points in the margin of some burns which seem about to slough are seen to revive under a chemio-tactic dressing instead of sloughing, and it may be the same with nerve filaments, which thus escape degeneration. This would explain the rapid and progressive healing.

Influenza and Oedema of the Eye-Lids.

—A series of ten or twelve cases of influenza are reported by the writer, in which oedema of the eye-lids was a prominent symptom. The usual history was that the patient went to bed well, but waked with marked oedema. There was no redness, or at most a faint pinkish tinge. At this stage there were no general symptoms. During the next twenty-four hours a bad headache developed, strictly localized to the supra-orbital region. The oedema advanced till the eyes were completely closed, and might spread downward into the cheeks. In at least half the cases there was deep congestion, often accompanied by oedema of the conjunctiva, but there was no discharge. The temperature never rose above 101° F. In more than half the cases the above symptoms constituted all the illness; but in a fair proportion, perhaps nearly half, after a few days, as the oedema receded the ordi-

nary symptoms of influenza set in, and there were pains in the back, legs, etc., and great prostration. The urine was normal. Most of the cases occurred in women. There was little doubt of the influenzal origin of the oedema. About half the patients had other influenzal symptoms, and of those who did not, many were found to reside in a house where influenza was prevalent. No cases were recorded apart from an epidemic of influenza. The diagnosis may be hard or impossible in an isolated case, and frontal sinusitis or angioneurotic oedema may be considered. The presence of other influenzal symptoms will soon clear up the difficulty, however. The prognosis is excellent. The usual lines of treatment for influenza should be followed. Cold compresses or cold boric eye washes hasten the subsidence of the oedema.—Spriggs, *British Medical Journal*.

Semeiosis of Cardiac Diseases.—Strubell (*Wiener klin. Wochenschr.*) concurs with the opinion of von Basch according to which angiosclerosis is nothing else but an alteration of the elasticity of the blood vessels together with more or less reduced, or even increased, reaction-ability. These vascular disturbances which occur especially in the splanchnic region are the main cause of the general increase of blood pressure and the secondary hypertrophy of the left cardiac ventricle. The angiosclerotic process runs through the following stages: (1) vasomotor (functional) contraction of the abdominal vessels (pseudo-angiosclerosis) in the nervous, in acute nicotine poisoning and in acute nephritis (in the latter case the contraction of the abdominal vessels is of longer duration); (2) first permanent diminution of elasticity in chronic nicotine poisoning, in alcoholics, super-nourished, etc.; first sign of secondary hypertrophy of the left ventricle of the heart which, however, is still ameliorable; (3) more pronounced angiosclerosis in chronic nephritis; (4) latent angiosclerosis (von Basch's); (5) pronounced arterio- and angio-sclerosis in which, however, the functional reaction has not entirely disappeared, even in the most advanced stage.

Hypertrophic Cirrhosis of the Liver of Uricemic Origin.—Baccelli (*Gazz. degli ospedali*) says that the pathological process may continue for years without causing death. There occurs a peculiar and hard enlargement of the liver under the dome of the diaphragm. The enlargement is rather round, extends uniformly over the entire border of the liver and is not uneven. The liver is situated somewhat lower than normally; the left lobe, lying upon the stomach, extends far beyond the median line,

is tough and smooth and shows no symptoms of shrinking. The left lobe approaches more and more the spleen, which is also pathologically thickened and enlarged. However, there never occurs disturbance of biliary or blood circulation, nor icterus or ascites. The abdominal veins, the portal vein as well as the cava, present no indication of increased pressure or of the *circulus inversus*. The pressure of palpation is disagreeable to the patient but there is usually only very little pain. There is but a sense of heaviness in the right hypochondriac region. When the patient is in the erect posture the liver prolapses on account of its weight, and it broadens out in transversal direction toward the umbilicus at the same time. The bulk of the organ is often so great that it produces a pronounced convexity of the last ribs of the right hypochondrium. Thus an inspiratory friction may be called forth which is noticeable by the patient and the palpating hand. The hemorrhoidal veins are slightly engorged, the sphincters have lost some of their contractibility. This uratic form of hepatic cirrhosis differs from fatty degeneration of the liver in as far as in the latter the border remains soft and never attains the peculiar toughness of the former. It is easy to differentiate between carcinoma of the liver and Bant's disease. More difficulty may arise when it comes to the differentiation between amyloid degeneration and uratic cirrhosis.

A New Method for the Examination of Gastric Function.—Schlapfer (*Munchener med. Wochenschr.*) says that an exact quantitative determination of gastric motility and secretion cannot be accomplished by the employment of Ewald's test breakfast. Sahli's test soup possesses the disadvantage that it cannot always be prepared in the same degree of consistency and with the same amount of fat. He has devised a soup-powder which contains all the components of the human nourishment (proteid, fat, carbohydrate) in exact combination, and which is colored red with neutral-red. This powder added to 400 cc. water on being warmed and stirred will produce a soup. Care must be taken that the water in which the soup-powder is contained does not come to a boil, as then the albumen will coagulate. The coloring matter of the soup is so intimately combined with the flower and albumen that it cannot be separated therefrom by mere washing. The coloring matter is soluble in a strongly acid medium only and goes into the filtrate, which assumes at once a fainter or more pronounced red coloration. The neutral-red becomes liberated according to the de-

gree of the digestive function of the stomach. The neutral-red is uniformly distributed in the entire gastric contents, and the amount of the coloring matter which has left the stomach may readily be ascertained if the gastric contents have been secured. As there is no direct absorption from the stomach it is solely the motility of that organ to which must be ascribed the transmission of the neutral-red; and hence the soup containing the latter may be a means to determine motor and secretory power of the stomach. As soon, namely, as the coloring matter (free or incorporated with the soup) enters into the small intestine it becomes absorbed and is finally carried into the urine. From the observation of the urine, which is more or less red colored, we may determine the length of time which it has taken for the soup to reach the duodenum, and also the total motor and secretory function of the stomach. The method is employed as follows: The neutral-red soup is taken into the empty stomach and the patient is asked to urinate every 5 to 10 minutes; the urine is kept in test-tubes. An hour after ingestion of the soup the gastric contents are extracted. If the filtrate is colorless then no acid has acted upon the test-soup, as otherwise the neutral-red would be found in the filtrate.

Diagnosis of Urinary Tuberculosis in

Children.—Green (*British Jour. Children's Diseases*) says that urinary tuberculosis in children is exceedingly common and, when recognized early and the primary focus removed, of distinctly good prognosis. Recent investigations show that tuberculosis affecting the urinary tract almost invariably begins in one of the kidneys from whence it spreads to the bladder. The task of diagnosis in a suspected case of urinary tuberculosis is two-fold. (1) The definite proof that the disease is tubercular, and (2), the detection of the primary focus of the trouble and the extent to which the disease has spread. Kapsammer examined the post-mortem records for ten years of the Vienna General Hospital and found that of 191 cases of tuberculosis of the kidneys, only 2 had been rightly diagnosed during life, 4 wrongly so, and 185 not diagnosed at all. It is important that attention should be given to the slightest disturbance, be it discomfort or undue frequency of urination. The routine examination of the urine should include a bacteriological examination. The systematic examination of the urine of all patients affected with albuminuria, irrespective of the presence of blood or pus, will reveal the presence of tubercle bacilli in 80 per cent. of the cases.

If in spite of repeated examinations no

tubercle bacilli are found in the urine, resort should be taken to intraperitoneal injections of the urine into guinea pigs; to the estimation of the opsonic index of the blood, and to the conjunctival or cutaneous tuberculin reaction. Having found tubercle bacilli in the urine, or being otherwise satisfied that the suspicion of tuberculosis of the urinary organs is justified, the next step to be taken is the possible detection of the primary focus and the determination of the extent of the disease. It must now be determined (1) whether the bladder is involved and if so, to what extent, and (2) what is the condition of each kidney? The state of the ureters should also be determined. In tuberculosis of the kidney the children usually complain of pain on pressure over the course of the ureter, especially at the hilum of the kidney and at the ureter's entrance into the bladder. If the ureter is tubercular, it is felt as a cord-like structure by a finger inserted into the rectum or vagina. The cystoscope offers the best method of examination and in children an instrument 14 or 15 French scale may be used. In advanced cases when the bladder is infected, ulcers may be seen on its wall. In the early stages, the bladder may be quite free, but the opening of the ureters shows hyperemia, edema, gaping or retraction. A valuable adjunct to the simple cystoscopic examination is the so-called chromo-cystoscopy, which consists in the observation (by means of a cystoscope) of the excretion through the ureters of a pigment injected subcutaneously. If there be any mechanical or functional interference with the excretion of the urine, then the coloring matter will not appear readily in the urine, or it will be diminished in amount, or be absent altogether.

Inoperable Cancer.—Drage, in *The London Medical Lancet*, says that surgical methods are a confession of defeat in connection with cancer, and he attempts to demonstrate that certain methods are the proper ones with which to treat the disease when the failure of surgery is complete. The author's methods are based upon the following working hypothesis, that it is necessary to make such an alteration in the blood as will increase the power of the human economy to starve the parasitic growth, to check the changes which are the result of the life of a parasite within the body, and to introduce an obstacle in the growth of fresh foci of disease. The writer began with sodium cinamate, basing its use upon the fact that it produces considerable leucocytosis. The various drugs allied to this were investigated chemically, and at present he uses the following: Sodium ortho;

coumarate is given subcutaneously in the form of a twenty-two per cent. solution in water, in a dose of twenty-five minims up to thrice weekly. Either cinannamic aldehyde in doses of one minim in capsules thrice daily, or five grains of acetylcoumaric acid thrice daily, are also given, both after food. In order to re-inforce the activities of these drugs it is necessary to apply a destructive agent to the growths. For this purpose antimonium oxide and copper oleate are used. No toxic effects have been experienced from the use of any of these drugs. He reports a number of cases of inoperable cancer in which great benefit followed the adoption of this line of treatment. Death never occurs from sepsis, the patients dying gradually from exhaustion. Patients whom the treatment affects least are those who have been treated with Röntgen rays after operation, or who presented large masses of scar tissue as the result of operation. The position which leucocytosis occupies with reference to the curative action of the remedies is necessarily a speculative one, and it is more than probable that it is an alteration in the serum which is the factor of the greater importance.

A New Operation for Depressed Fracture of the Nose.—Ouston (*British Medical Journal*) describes a new method of treating depressed fractures of the nose. The writer states that this accident occurs more often than the literature of medicine tells us, and that but little attention is paid to the proper treatment of it in practice. If internal displacements occur, submucous resections of the septum and allied operative procedure are usually carried on later in life, if at the time of the accident the patient is young. If external deformity occurs, a child with this condition is brought to the surgeon for advice, and one of the four following opinions is probably given: (1) that the child will grow out of it; (2) that nothing can be done; (3) that the surgeon will try to rectify the condition, but that success is very doubtful; (4) that after the child has attained full growth, the deformity can be corrected by the injection of paraffin.

Time will show the fallacy of the first opinion. The second is eminently unsatisfactory, albeit honest in intent. The third has been given four times in four cases by this writer; the first two results were failures, the third, however, a success. The method by which this success was obtained is as follows: The patient, a girl of ten years, had fallen on her nose a few weeks previously. The upper lateral cartilages were displaced backwards from the nasal bones and separated posteriorly from their attachments to the nasal processes of the

superior maxillæ. The lower ends of the nasal bones projected, with a depression below them where the triangular cartilage was markedly indented. The operation was performed by passing a tenotome subcutaneously through the side of the nose at the site of the depressed nasal cartilages, dividing the structures, uniting them posteriorly with the nasal bones and the nasal processes of the maxillæ. By transfixing the nose with this knife, the whole nasal mass could be uplifted to the normal level. The nasal bones were transfixed with a large, strong needle as near their common anterior suture as possible, this being effected by means of sharp taps with a mallet. Strips of gauze were then wound around the two needles on each side in a figure-of-eight manner. The upper needle acting as a fixed point assisted in bringing up the depressed parts by tightening the strips. Although some local swelling occurred, no constitutional effects were seen. The child was quite comfortable, and on the tenth day the needles were removed, leaving behind as a result of the treatment only two small pressure ulcers where the strips had rested. These healed in a few days. Six months have elapsed, and the nose still preserves its normal appearance, justifying the excellence of this new operative procedure.

Urinary Tuberculos in Children.—

Leedham Green, in *The British Journal of Children's Diseases*, says that instead of regarding it as a relatively rare disease, which, when present, is difficult to alleviate and hopelessly incurable, we now know that urinary tuberculosis is exceedingly common, and when recognized early and the primary focus removed is of distinctly good prognosis. Systematic examination of urine will reveal tubercle bacilli in many unsuspected cases. If in doubt, the opsonic index and the ocular and cutaneous reactions should be resorted to. The writer notes the weak points of these tests, and says that the only reaction giving a clue to location of infection is that of subcutaneous injection of old tuberculin. The author insists on the importance of cystoscopy for estimating involvement of the bladder, and says that it may be practiced in the youngest girl and in boys over 8 years. Chromocystoscopy—the injection of carmine blue subcutaneously, and observing its excretion through the cystoscope—is a valuable adjunct. Where numerous tubercle bacilli and transitory hematuria exist without indication of site of trouble, a good substitute for exploratory nephrotomy is to expose the ureter subperitoneally by a small incision in the abdominal semilunar line, open it by a small longitudinal cut, insert a fine ure-

thral catheter, and collect the urine separately. A fine stitch closes the opening in the ureter, which is dropped back to place and the wound is drained for a day or two.

Early Rising after Labor.—Wilhelm Rosenfeld (Gyn. Rund.) calls attention to the possibility of the position of the newly delivered woman on her back for nine days being a cause of retrodeviation. Coe permits his patients to rise to empty the bladder within three hours after labor. Other obstetricians allow of special gymnastic movements beginning three days after labor, consisting of movements of the abdominal muscles and of the sphincter ani and vulvæ morning and evening. No bad results have been seen from these movements, and others have begun to allow the puerperal woman to get up on the third day for an hour or two, in cases in which there is no rise of temperature. This aids in the involution of the organs, makes the movements of bladder and bowels easier. The strength of the muscles is better preserved and the appetite is better. The questions that must be decided in reference to this procedure are whether embolism will be caused and whether prolapsus and retrodeviation will be favored. Prolapsus will occur only when there has been a previous lesion of the pelvic floor, either tearing or stretching the fibers. Long lying in bed will not cause a union of these ruptured muscle-fibres, as they immediately retract and the ends do not reach one another. An etiological factor in prolapsus is atrophy of the pelvic floor. Long rest in bed will increase the weakness of muscles, while the natural movements will tend to strengthen them. Women who have been up for some hours each day feel better and stronger than those that have lain in bed for nine days and are then obliged to go home and do their own work and care for the child. The author allows puerperal women to sit up for a few hours each day after the third day and to increase the time each day to the ninth, when they finally get up permanently. These patients had undergone a perfectly normal labor and had no rise of pulse or temperature. After the first three days a vaginal examination was made and it was ascertained that there was no abnormal condition of the genital organs before the woman was allowed to get up. These women wore a well-fitting binder all the time. From January 15 to March 30, 160 women were confined at the Vienna Lying-in Hospital. Of these 102 were able to get up on the third day. In only one case was there any rise of temperature, and this was from a beginning mastitis which was relieved by Bier treatment. No hemorrhages were ob-

served. At the end of seven days the uteri were at the level of the symphysis, and at the ninth day could not be felt. He considers these results sufficiently good to justify further trials of this method. All the women stated that they felt better and stronger than when they lay in bed for nine days.

Miscellaneous.

Successful Remedy for Headache.

Dr. H. A. Niemeyer, of San Francisco, tells of a dentist, formerly his office partner, who suffered for years with aggravated constipation accompanied at intervals with violent headaches. He was associated with the Medical and Dental Departments of the University of California, and everything his colleagues suggested was tried without perceptible result.

So intense was the pain at times, that he had often to close his office and take to his bed or couch. At such times he could get relief only by means of hypodermic injections of morphine.

About eighteen months ago, he was seized with an attack more severe than ever before. He rolled on the floor with pain and his skin took on a greenish hue.

Dr. Niemeyer, quieted him with a hypodermic and the next day prescribed Akaralgia, a desert spoonful in water half an hour before breakfast. Decided improvement resulted. The treatment was kept up and the patient now declares he "could not keep house without" Akaralgia.

During the eighteen months he has had but two slight attacks of headache, the last one during the fire following the earthquake of April 18th, when he was engaged in relief work, driving an automobile day and night for three days without sleep and and practically without food. Of course no treatment was thought of then.

With the trifling exceptions noted, the dentist says he has been a well man for more than a year—a result which he attributes almost wholly to the beneficial action of Akaralgia.

Jackson Springs and Jackson Springs Sanitorium—Where Located and What They Are.

Under a date of which man knoweth not, there was discovered in the deep sand section of Moore county, bubbling forth from a fissure in a bed of solid rock a spring of water, which was called Jackson after its discoverer, the medicinal properties of which was recognized by the people of the

surrounding counties, who, suffering from different diseases, came and encamped about the spring, living in tents, wagons and primitive cottages. These visits were always attended with satisfactory results.

This place grew more popular each year as it became more widely known throughout the State and adjoining States.

The water, upon being analyzed by the State Chemist, was found to contain the following chemical analysis

JACKSON SPRINGS WATER.

Analysis No. 6,147.

NORTH CAROLINA AGRICULTURAL
DEPARTMENT,
Experiment Station.

Raleigh, N. C., Jan. 3, 1890.

Sir:—The sample of mineral water sent to the Station for analysis, in a demijohn, marked P. M. Wilson, contains on evaporation, per U. S. gallon—

Sulphate of Potash.....	577 grains
Sulphate of Soda.....	263 grains
Chloride of Soda.....	825 grains
Carbonate of Soda.....	578 grains
Carbonate of Lime.....	1,721 grains
Carbonate of Magnesia.....	833 grains
Oxide of Iron and Aluminum...	182 grains
Sodium Phosphate.....	Trace
Silica	2,567 grains

Total..... 7,546 grains

Your obedient servant,

H. B. BATTLE, [Seal]
Director.

As shown by this analysis these ingredients are so minutely proportioned by nature's scientists, they are especially indicated in renal, hepatic, digestive and nervous disturbances.

The merits of this water being fully realized, a growing demand for comfortable accommodations became a necessity. Consequently a generous company was formed, who have spared neither money or talent in making this one of the most attractive all-the-year health resorts of the South.

From year to year at this place there has been a growing demand for a home-like retreat for people who are not able physically to undergo the excitement at a public hostelry, but who need the necessary medical attention in connection with the use of the water. Consequently this long-felt need has been supplied by the erection of a building equipped with all the conveniences of a modern sanitorium.

This building, which is owned and managed by A. A. McDonald, M. D., consists of twenty rooms, including office, laboratory, operating and private consultation rooms. The rooms are well ventilated and conveniently arranged.

The Sanitorium is equipped with modern diagnostic apparatuses; also furnished with various electrical appliances. It is located within a short distance of the spring. Its water took second prize at the St. Louis World's Fair.

Summer-Time is Sprain-Time.

Some wit has said that "Summer-time is sprain-time." Golf, tennis, baseball and the other outdoor sports inaugurate a season of sprains and wrenches, and ankles, knees, wrists, elbows, shoulders, and backs pay the penalty of a missed drive, an overhand smash or a slide to base. The resultant conditions, the stretching or tearing of ligaments, contusion of the synovial membrane and damage to vessels and nerves, are best remedied by the use of Antiphlogistine, which markedly aids in the reconstruction of the injured part.

The removing of the products of inflammation, through the absorption of the liquid exudate from the swollen tissues, and by permitting free circulation of blood through the seat of the injury, Antiphlogistine acts as nature's first assistant. The affected cells are stimulated and toned up through endomosis, and the process of repair is greatly hastened.

Antiphlogistine should always be applied directly to the affected area as hot as can be comfortably, and covered with absorbent cotton and a bandage.

Dr. Geo. F. Petty of Memphis, Tenn., has closed his Denver and Atlantic City Retreats and has sold his interest in the Oakland Retreat to his former associate Dr. C. L. Case who will continue the work at Oakland in his own name.

Dr. Petty's entire work will hereafter be done at his Memphis Retreat under his personal supervision. Improved facilities have been provided for handling alcohol and drug cases at the Memphis Retreat and hereafter every patient sent there will be under Dr. Petty's personal care.

Fibrolysin in Skin Affections.

Since the introduction of fibrolysin good results are reported in a very large number of affections in which excessive formation of fibrous tissue forms a part, such as Dupuytren's contraction, pyloric stenosis, post-operative abdominal adhesions, stricture of the urethra, opacity of the cornea,

and many others. In dermatology fibrolysin has been largely employed in keloid, in hypertrophic scars after burns, in scleroderma, and in elephantiasis. The most satisfactory method of administration is said to be by intramuscular injection into the gluteal region, but it may also be injected locally into the lesion. The dose of fibrolysin is 2.3 Cc., given on alternate days, or at intervals of two to three days. An important technical point is to rinse the syringe in alcohol immediately after use, to prevent the accumulation of any exudate. In the case of hypertrophic scars and fibrous contractions after burns the fibrous tissue is dissolved and softened, and the tension relaxed. As regards scleroderma, the results have not been uniform, and further trials are necessary before it can be claimed as a reliable remedy in this condition. A case of von Recklinghausen's disease has been reported as much benefited, the fibrous nodules becoming softer and smaller. In elephantiasis from the deposit of fibrous tissue as a result of repeated attacks of cellulitis, improvement has taken place in the direction of decrease in size of the affected parts.

The specific action of thiosinamine and of its modification, fibrolysin, in dissolving fibrous tissue is explained by the fact that these drugs lead to a temporary diminution of leucocytes, followed by a great excess of them, and consequent greater activity of lymph flow in the scar tissue, which softens and dissolves the connective tissue fibers.—The Hospital, London.

Treatment of Basedow's Disease.

It is a very difficult to draw the line between true Basedow's disease and hyperthyroidism with cardiac palpitation and nervousness, but it is probable that both are manifestations of the same condition. The number of drugs recommended is legion, which is sufficient proof that no specific has yet been discovered. The best results are undoubtedly obtained with the antithyroidin of Moebius. Rodagen, the milk of thyroidectomized goats, is less reliable in its action. Rest, diet, electricity, and massage do a certain amount of good, but the Röntgen rays have proved disappointing. The most rapid cure will follow a hemi-extirpation of the gland, according to Krecke. The recent statistics have been so favorable as to warrant surgical intervention also in the early and mild cases. Thus, of 17 cases operated upon by this author, only 1 died. After the operation, there is generally a moderate rise of temperature, with an increased pulse-rate sometimes up to 180-200 per minute. All the

Clinical

Chronic Catarrhal Diseases

The fundamental etiologic factor in most chronic catarrhal diseases can be found in lowered vitality—in turn the result of nutritional weakness. Consequently a chronic catarrhal process usually subsides as the organism gains adequate strength and vitality. This is the reason why

GRAY'S GLYCERINE TONIC COMP. has proven so efficacious in the various forms of catarrhal disease. It improves the circulation, promotes better nutrition and raises the vital index. As a weakened mucous membrane recovers its normal tone and resisting power, catarrhal processes invariably disappear.

Samples and literature on request.

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because of its great ability as a nourishing tonic and blood replenisher, is peculiarly adapted to—supply this needed help—and—resisting force. Its great—palatability—overcomes in most cases—the objection—and—solves the problem—of administering Cod-liver Oil.

R Emulsion Olei Morrhuae—(Cloftlin)

An efficient preparation for those needing Cod-liver Oil, superior to iron, bitter tonics or the prevalent alcoholic extractives.

See—"New and Non-Official Remedies"—
Page 44, 3rd Edition.

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In Summer Complaints

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ALKARHEIN OF USE IN INDIGESTION.

We do not claim that it will cure all cases of dyspepsia, but it will be surprising how useful it will prove in very many derangements of the gastro-intestinal tract.

COMPOSITION---With Physiological Action.

Rhubarb
2 1-2 Grains

A superior laxative because it does not impair but improves the digestion—Is a tonic, also astringent.

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(With the acrid resin removed)—The great tonic and corrector of the mucous surfaces.

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Antacid. Increases Alkalinity of the blood and the oxidation and excretion of effete matters.

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1 Grain

Promotes intestinal digestion, converts starch into sugar and dextrose; proteids into peptones; emulsifies fats, digests the casein of milk.

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Valuable in atonic conditions of the intestinal mucous membranes, with flatulence and diarrhea.

Spirit of Peppermint and a minimum of Simple Elixir is a menstruum that will commend itself to physicians.

Think of Alkarhein in acid dyspepsias, flatulent colic, infantile colic, cholera infantum, cholera morbus, diarrhea and all abnormal acid conditions of the alimentary tract. Think of Alkarhein in these cases and prescribe it as thousands of physicians have been doing for many years with the confidence born of experience.

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CINCINNATI

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A new and modernly arranged building including modern diagnostic apparatuses and various electrical appliances for the treatment of non-contagious diseases. Special attention given to renal, hepatic, digestive and nervous diseases.

Patients have free access to the celebrated Jackson Springs mineral water which took second prize at the St. Louis World's Fair. This water is especially indicated in above named diseases.

Centrally located in Moore County, N. C., amid the sand hills and long leaf pines. Elevation 700 feet above sea level. Rates reasonable. For further information, address

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Owner and Manager

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patients operated upon have been heard from two months to three years after the operation, and the reports have been excellent, except that the exophthalmos generally persisted to some extent. Before operating, it is important to examine the patient thoroughly. An operation is contraindicated where evidences of a persistent thymus gland are found, by percussion, palpation, Rontgen examination, or inspection of the throat. It is better to narcotize the patients with ether, and not use anesthesia.—Muench. med. Woch.

"Kelene" (Pure Chloride of Ethyl).

It will interest the profession to learn that in addition to their well known automatic glass spraying-tubes, the manufacturers (Fries Bros., 92 Reade Street, N. Y.) are also furnishing sealed tubes containing 3cc. and 5cc. These sealed tubes are designed to fit any Inhaler the physician may have purchased for the administration of mixtures.

Every practitioner knows that the good qualities of these mixtures are in the proportion to the amount of pure chloride of ethyl they contain, and the small percentage of admixtures is a detriment.

The mixing of two or more products with different boiling points cannot help but act differently according to the various conditions liable to prevail.

"Kelene" gives quick and effectual results and on account of its purity (absolutely assured by new glass tubes) is considered far safer than any other brands of chloride of ethyl, or any of the so-called similar anesthetics. A trial will determine its many advantages.

Persistent Crying in Hereditary Syphilis.

Some well-nourished children who are suckled regularly and present no digestive troubles are constantly crying, especially at night. Hunger, colic, or desire for movement may be regarded as the cause, but treatment suited thereto proves unavailing. This symptom does not develop at birth, but a fortnight or one or two months later. In some cases the familiar signs of hereditary syphilis may be present, while in others the child may appear free from any specific stigma, and the parents will deny any history of infection. Comby has collected five cases of this condition, four of which were fatal and displayed signs of syphilis at the autopsy. In all, however, the cries soon stopped after mercurial treatment had been instituted. The cries are probably due to the pain provoked by the irritation of the bone and periosteum or to epiphyseal lesions.—*Rolleison, in Brit. Journ. of Children's Diseases.*

Tyree's Antiseptic Powder.

A quantitative, qualitative, bacteriological and clinical analysis of this preparation is embodied in a most interesting little brochure and sample, which will be mailed physicians by the manufacturer, J. S. Tyree, at Washington, D. C., free of cost upon application. We firmly believe that it is not so much what it contains that gives it its marked value, as the way in which the ingredients are combined.

For leucorrhea, gonorrhea, vaginitis, pruritus and ulcerated conditions of the mucous membrane, one to two teaspoonfuls to a pint of water three or four times a day. For scrofulous, syphilitic and varicose ulcers, apply the powder full strength or dilute with boracic acid. As an ointment, use from one to three drachms to one ounce of petrolatum. For spraying the nose and throat, from twenty-five to one hundred grains to one pint of water (dissolves immediately). For immediate deodorizing and disinfecting, sprinkle the powder direct upon the object affected; the results will be instantaneous. For prickly heat, poison oak, squamous eczema and other conditions of a similar nature, use from one to eight teaspoonfuls to a pint of water, (has proven very serviceable for these conditions.) For the purposes above enumerated it hardly has an equal.

Sarcoma of Female Mamma.

Beatson in *The Edinburgh Medical Journal* reports such a case. The writer states that the prognosis after removal of a mammary sarcoma must always be a guarded

one, although statistics seem to give more favorable results in excisions of the breast for sarcoma than for carcinoma. Thus, Horner's figures show 76.9 per cent. free of recurrences after two years, and ultimately 61.5 per cent. of total recoveries, but their statistical value depends entirely on whether or not the cases were all true sarcomatous tumors. The spindle-celled variety of tumor is undoubtedly the least malignant. Probably the most important element in prognosis is the rate at which the tumor has grown before operation—the more rapid that has been, the more unfavorable. In fact, clinical experience teaches that the malignancy of some sarcomata exceeds that of the carcinomata, and that early invasion of the axillary glands is an unfavorable feature. Schmidt holds that these growths originate from the endothelial cells of the perivascular spaces, a fact which suggested to him the name of peritheliomata or endothelial sarcomata. Others have preferred to call them alveolar sarcomata or angiosarcomata, but both these terms fail to express the exact nature of the structural origin of the tumors, whereas the expressions peritheliomata and endothelial sarcomata do. In connection with this matter of nomenclature, it must be remembered that there are two distinct views as to the origin of the bloodvessels in such tumors. Some regard them as furnished by the local tissues they have invaded and replaced. Others, like Creighton, favor the opinion that the embryonic connective cells themselves originate the bloodvessels and blood corpuscles as a pathological process, just as they are known to do in foetal life physiologically; is that, the vessel forming functions of the connective tissues of the mesoblast in embryonic life have been reawakened after their normal period of activity has long passed away, with the result that there has been developed a sarcomatous tumor of a sanguineous type. As to which of these views is right it is not easy to be dogmatic, but to tumors formed according to this latter theory the term perithelioma is best applied, while the expression endothelial sarcoma is more applicable to the view that they have sprung from the endothelium of the perivascular spaces of the pre-existing bloodvessels.

Fractures of the Base of the Skull.

MacLaren in *The British Medical Journal* says that the case fatality of fractures of the base of the skull is almost three times that of the vault alone. This is due to several causes. The functions of the basal parts of the brain are more important and more necessary to life than those of the hemispheres. Close to the base are the cardiac and respiratory centres. Bloodvessels pass through many foramina hemorrhage. Al-

most all injuries to the base of the skull are compound, this being the main cause of the heavy mortality. A basic fracture may involve any of the three cups on which the brain rests, but the middle fossa is the one most commonly implicated, and even when fractures originate elsewhere they commonly extend so as to involve it. Injuries which open the subarachnoid space into the nose or pharynx involve less danger of sepsis than those which communicate with the external meatus. The external openings of the nasal cavities and of the mouth are long way from the site of any fracture of the base, and the channels act as filters for the air. So that, unless the fracture is the result of direct violence, there is a better chance of internal sepsis being avoided than when there is communication between an unclean ear and interior of the skull. A very usual story with a fracture of the base is immediate insensibility after the accident, generally amounting to deep coma. After a time, which varies much, this gradually passes off, and the patient seems to do well until the third, fourth, or fifth day. Then he complains of severe headache, and light distresses him. He is seen to be flushed and restless; presently he vomits. His pulse is either abnormally slow or unduly fast. Jactitations, delirium, and convulsions follow, and then as a last stage paralysis of splinters and advancing general muscular paralysis. Profound coma ends the scene. The original lesion was not a necessarily fatal one by direct damage, but septic meningitis has occurred, and has produced the symptoms and the fatal result. If basic fractures could be treated as are those of the vault, the difference in mortality should not be great. The writer reports two cases of fracture of the base with discharge of fluid from the ear. In both the ear was kept as far as possible aseptic with boric acid, and both patients recovered. Boric acid is admirably fitted for keeping the external ear and meatus aseptic. It is used dry, but is readily soluble. When in contact with a fluid of discharge it first becomes converted into a paste, and then undergoes complete solution. It cannot form a retaining plug. There is no means of making an effective application or employing any useful treatment to the nasal or pharyngeal cavities. External cleanliness and pure air can be secured, however; decayed teeth should be removed and the mouth kept clean. Trephining may have a useful place in the treatment of fractures of the base; the continual oozing of cerebrospinal fluid is a most important factor in the evolution of septic meningitis. A trephine opening and drainage of the subarachnoid cavity prevents the fluid from being under tension and allows

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Very inexpensive which, when dissolved in water, makes a pleasant, non-irritating non-poisonous solution, not staining the linen, and which has a Specific Action against those peculiar pathogenic germs which infest the Genito Urinary organs Male as well as Female, hence is a

VALUABLE REMEDY FOR

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If intelligently used, according to directions in will relieve all cases, including the acute cases and the stubborn chronic ones as well. Also very effective in Pruritus of the genital regions.

Its use is most agreeable to the patient, affording quick relief and proceeding steadily to a cure.

The formula together with bacteriological and clinical potency of the preparation is furnished the medical profession.

A two-ounce box of TYREE'S ANTISEPTIC POWDER enough to make two gallons of antiseptic lotion will be sent Free. This would make about Seven dollars worth of the usual bottled antiseptic solutions. This is all pure capital—you pay for no water. You can take it with you—no liquids to carry.

J. S. TYREE, Chemist, Washington, D.C.

it to escape by a safely arranged route. Tension is equally relieved by a spinal as well as a cephalic drain, but trephining allows of an examination of the skull and brain at the point of injury.

Pneumin, a new Drug for Tuberculosis.

Through the action of formaldehyde upon creosote, a yellow-white, odorless powder is obtained, which has received the trade-name "pneumin." The investigations of Eschbaum show that this substance is a valuable non-toxic intestinal disinfectant and antiphthisic. The proper dose is 15 grm., taken dry upon the tongue, fifteen minutes before meals. Unlike creosote itself, the author states that pneumin does not injure the stomach, but increases the appetite better than other stomachics. As the patients eat more, the general condition will improve to a pronounced degree. There seems to be no influence upon the cough, expectoration, fever, and the night-sweats, while in tuberculous enteritis the diarrhea is sometimes aggravated. Patients with hyperacidity frequently complain of more pain, though test-meal did not show more acid. Other after-effects, so common with creosote, did not occur.—Muench. med. Woch.

The prudent practitioner, being guided by the dictates of experience, relieves himself from disquieting uncertainty of results by safeguarding himself against imposition when prescribing

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(Smith)

The widespread employment of the preparation in the treatment of anomalies of the menstrual function rests on the unqualified indorsement of physicians whose superior knowledge of the relative value of agents of this class stands unimpeached.

By virtue of its impressive analgesic and antispasmodic action on the female reproductive system and its property of promoting functional activity of the uterus and its appendages, Ergoapiol (Smith) is of extraordinary service in the treatment of

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ETC

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The Charlotte Medical Journal

VOL. LIX

CHARLOTTE, N. C., JUNE, 1909.

No. 6

Neurasthenia.*

By J. N. UPSHUR, M. D., Richmond, Va.
Ex-President and Honorary Fellow of the Richmond Academy of Medicine and Surgery, The Medical Society of Virginia, The Tri-State Medical Association of the Carolinas and Virginia, Honorary Fellow of the State Medical Society of West Virginia, Etc.

In the discussion of neurasthenia, the writer is confronted at the outset by the almost unlimited scope of the subject, and realizes his inability to do it justice in the limits of a single paper. We must be content, therefore, if the end of making it practical and suggestive shall be attained.

Difficulty of diagnosis in the beginning of these cases is a serious handicap, and we grope for a longer or shorter time for a clear vision of the malady, and a true conception of the therapeutic indications for the appropriate remedies which will bring relief. So many phases may it assume, and so kalidoscopic may be manifestations in every direction, that it is a constant effort not to become discouraged and give up the fight.

Our hope of arriving at a clear conception of the case is to recognize certain cardinal symptoms which are always present, at least one or more of them are. Prominent among these is headache, a clavus, located on the top of the head, intense—feels as if some weight pressed upon it. If the neurasthenia be a sequel to the climacteric, the headache sometimes extends to the occiput and down the neck, indicative of the uterine origin. Itching in various parts of the body, very commonly of the scalp; numerous hyper-aesthetic places scattered over the body, varying from a dull sensibility to acute pain; sometimes the sensation is characteristically lithæmic, burning and stinging in character, pointing to the suggestive causation of gouty conditions from nervous disturbances. The patient is sometimes subject to disarrangement of the co-ordinate function, inability to walk or stand, manifesting itself at irregular intervals and passing off in a short time. In men, following, as the malady does oftentimes prolonged business strain, the outlook for entire recovery is far better than with women. It may take the form of extreme nervousness, insomnia, disinclination to exertion or grave digestive disturbances, the danger of which

is that it is attributed to other functional causes or organic lesion and consequent therapeutic error results. On exertion, patient is easily fatigued. There is painful, localized muscular spasm. Knee jerks are at first increased, but if tested often, soon become exhausted—differing in this respect from the organic cause; they will return if reinforced. Other tendon reactions may at times be present and then absent. Patient is conscious of a sense of malaise, constant feeling of tire and exhaustion, complaints of more or less constant vertigo, which usually follows exertion. Patient experiences pains and aches in various parts of the body—back, legs, areas of tenderness along the spine, changing from time to time, cutaneous hyperæsthesia and paræsthesia; vision is affected, use of the eyes causes vertigo, blurring and confusion of vision, and headache. The ocular muscles suffer, as do others in the body; there is impairment of accommodation. Adjustment of glasses in these cases fails to give relief, and there is aggravation of the symptoms because of the disappointment of expected relief. Tinnitus aurium is sometimes present, and hypersensitiveness of the auditory nerve makes the patient very intolerant of noises. Even taste may be perverted. Patient is unable to sustain prolonged conversation, or to concentrate the ideas, memory is unreliable, or rather patient supposes it to be, but when tested this often proves not to be the case. Self-confidence is impaired or lost; patient is irritable and sometimes emotional. Neurasthenics are prone to exaggerate symptoms and are always on the lookout for new ones. All sorts of mental fears possess them—of being alone in crowds, of impending danger to themselves or their families. There are disturbances of digestion, circulation, secretion and the sexual functions. Sleep is unrefreshing, disturbed by unpleasant dreams, and patient awakes feeling tired and exhausted.

I will not consume your time to speak of the pathology of this affection. Essentially functional, organic derangement found at autopsy is essentially secondary to prolonged and exhaustive neurasthenia.

Before discussing treatment, let me cite a few illustrative cases:

Case I. Merchant, giving exhaustive attention to business, which had proved very lucrative, suddenly seized at night, immediately after coition, with agonizing headache, pain located in top of head; in-

*Presented to the Tri-State Medical Association of Virginia and the Carolinas, at the 11th annual session held in Charleston, S. C., February 16-18, 1909.

tractable to remedies, only being paliated by them, increasing on exertion, or by attention to business; then such mental depression that there was danger of suicide. A visit to Europe and complete relaxation from business for a year restored his health.

Case II. A man about fifty-three, physician, who had been under the strain of exhausting and exacting professional work for more than thirty years, developed obstinate digestive trouble, intractable to treatment, insomnia, nervous tremor, inability to concentrate his mind at mental effort, vague perversion of sensations. On examination, he showed a dilated stomach of five inches, almost complete paresis of muscular coat of stomach, great debility, and suffering from inanition. Under treatment by complete rest, lavage, electricity (faradism) and prolonged use of strychnine, after several months he was able to partially take up his practice again, but symptoms persisted for nearly eight years before complete recovery. Four years after the beginning of the attack careful examination showed that the stomach had returned to its normal size.

Case III. Woman of previously good health, mother of two children, labors normal, has been under observation for the past three years. Symptoms first manifested at climacteric, after cessation of flow, during process of equalization of vascular and nervous forces. At the outset she had some of the commoner symptoms of neurasthenia. Always she had the headache on the top of the head, extending to the occiput and down the neck. At one time there was disturbance of co-ordination; would suddenly lose power to walk, and would have to sit down for a time. Was averse to going into public or seeing people. All sorts of hyperæsthetic and paræsthetic sensations developed, with digestive disturbances, glycosuria, impairment of vision, spots on fundus of eyes, muscular disturbance of eye muscles with symptoms of eye strain. Adjustment of glasses afforded no relief; complained once that her "left eye felt like a glass eye" and inability to move it. There was vertigo at times, numbness in right limb, hypersensitive in the foot and heel, temporary hypersensitiveness over the nerves on the anterior forearm. During this time (about two years ago) her daughter had a sharp attack of diphtheria, through which her mother nursed her most efficiently; no evidence during this time of special anxiety, of any neurasthenic symptoms. Upon the recovery of the daughter the mother relapsed into her former condition. At times there was marked improvement when absent from home in the summer. Digestive functions normal. Patient

has recently improved, is able to walk out moderately, sleeps well, is cheerful, and can use eyes better. She has had everything imaginable in the way of treatment—everything in the way of nervines and tonics, rest in bed, faradism, prolonged cold effusions, and friction to spine.

Case IV. A young married woman, German, had miscarriage last summer, was attended by midwife; had uterine hemorrhage for two months before seen by me; was relieved by divulsion and curettement. I was called to see her last September; could find no well defined symptoms. There were slight endometritis, obstinate constipation, digestive disturbance, urine abnormally acid, mental depression; latterly hyperæsthetic areas and pain developed on top of the head. Diagnosis in doubt for a long time; treatment unsatisfactory. I am satisfied that the case is a mild neurasthenia following the depression from the miscarriage and subsequent hemorrhage.

The cases I have cited represent all the walks in life and illustrate the difficulties to be encountered in treatment to which I referred in the beginning of the paper.

In the management of these cases, in my experience, the most difficult problem to overcome is the mental depression of the patient, and consequent discouragement, resulting in impairment of will-power and the difficulty of inducing them to help the cure by using it and to persevere in treatment. In no affection is absolute confidence in the physician more essential. Every case must be treated on its own merits. What will be beneficial in one case may prove very harmful in another. Good results have often been obtained by the rigid enforcement of the rest cure of Wier Mitchell, but this treatment will prove harmful to others. Life in the fresh air, freedom from household and business cares, radical change of environment, mental diversion, and occupation along new lines, so as to get the patient, as it were, out of an old rut, are essential. The utmost care should be exercised in the matter of proper diet and sleep, procured by such means as do not risk the establishment of the drug habit, and such diet as is nutritious and digestible, without being excitant of a lithæmic tendency.

Many drugs have been used for the relief and cure of this affection, such as all of the bromides, singly and combined, preparations of phosphorus, in the form of the compound phosphorus pill, and zinc phosphide, sumbul, arsenic, assafætida. In sexual neurasthenia, strychnine, iron, cornutine, damiana, valerian—in fine, it would be unnecessary for me to recite the whole armamentarium of therapeutics. It is, however,

important to vary the drugs from time to time, as indications point out, and as tolerance of the one being exhibited seems to be established. Some clinicians object to iron, but while some cases may not be benefitted by it, yet it may be important in others. When anaemia is present it will prove beneficial, given in such form as can be most easily assimilated. The mineral acids, combined with strychnia and one of the bitter tonics are very useful. Alcohol, tea, coffee, and tobacco should be prohibited.

I have already referred to the use of strychnine, but I wish to emphasize more fully my opinion of its value, especially if the neurasthenia manifests itself most prominently in digestive disturbance. Strychnia is not only a bitter tonic, but tonic to the digestive system, more especially through the nervous system, by stimulation of vaso-motor nerves of the muscular coat of the stomach and bowels, thus quickening digestion and improving general nutrition. It stimulates the motor nerve cells of the spinal cord, cardiac motor ganglia, the respiratory vaso-motor centers in the medulla, and contracts the arterioles all over the body. The cerebral convulsions are not affected. It is my practice, after using other agents to come back to strychnia, and push it, in one-twentieth of a grain doses, three times a day for several weeks. The result is usually beneficial.

I am well aware how much has been left unsaid that might have been said, but if these cursory remarks shall be the means of stimulating discussion and new suggestion of means of cure, I shall be amply rewarded.

Case of Amebic or Dysentery, Complicated by Abscess of Liver.

By Samuel H. Cannady, M. D., Oxford, N. C.

I trust a report of this condition in a patient who recently came under my observation will be as interesting to the readers of your Journal as it has been to me.

The patient is a young man twenty-four years of age, whose occupation is that of Railway Mail Clerk, from Greensboro to Goldsboro, N. C.

There is no family predisposition to disease of any kind.

Six months ago the patient began to have painful and watery stools, perhaps six to ten in twenty-four hours, consisting of undigested material and blood-stained mucus.

This condition continued, notwithstanding the remedies ordinarily prescribed were persistently given.

Precautions as regards diet and rest were not observed, with the result that he went from bad to worse, the blood increasing,

stools containing shreds of mucus membrane and other debris from the disintegration of intestine and contents, emaciation and loss of strength became very pronounced.

Ulcers in the rectum and descending colon were discovered with the proctoscope and treated locally, but no improvement was apparent.

A specimen of stool was sent a Microscopist with the idea that tubercle bacilli might be present, but the findings were negative.

Another specimen of stool was examined and motile amebae found.

In the meantime the patient began to have fever of an intermittent type, pain in the right shoulder, extending down the side in the axillary line.

Percussion over the liver revealed quite an extension of the area of dullness upward as high as the nipple.

On deep pressure over this area, marked tenderness was elicited, there was an icteric appearance of the skin and irregular sweats.

One remarkable feature of the case was the perfect gastric digestion and the desire for food.

When amebae were found in the stools quinine irrigations (one to one thousand) were used once per day, the stools became less frequent (two in twenty-four hours), blood and mucus disappeared, and the pain and tenesmus improved.

While the bone condition seemed better, the liver symptoms continued.

Knowing the frequency of liver abscess complicating amebic dysentery, and taking the various symptoms into consideration, a diagnosis of abscess made.

The patient was referred to Dr. George Ben Johnston of Richmond, Virginia, for an opinion, and an operation, if he verified my diagnosis.

Other specimens of stool were examined and numbers of amebae were found, the same physical signs on examination of the liver were elicited by him, and an operation for abscess was determined upon.

The ninth rib was resected, both layers of pleura stitched together, the diaphragm cut through, and an exploring needle used to locate the presence of pus with no results; but on palpating higher up, adhesions were found, beyond this a bulging which proved to be an abscess containing half a pint of pus.

This abscess was drained and the quinine irrigation resumed.

At this time the patient is doing well and everying points to a speedy recovery.

The infrequency of amebic dysentery, in this climate, it being a tropical disease, and

the fact that this patient had not been out of the State, are rather disconcerting in making a diagnosis.

In view of this case having developed without any known infection, I thought a report of it might be of service to some one confronted by similar conditions.

Gastric Cancer—A Diagnostic View.*

By Dr. W. O. Nisbet, Charlotte, N. C.

It is the purpose of this paper, (1) to discuss the signs of operable cancer, and (2) to consider why most cases of gastric cancer are diagnosed or presented for diagnosis too late for operation.

Cohnheim, of Berlin, divides gastric carcinomata into three groups: (1) Cardiac; (2) Extra-Osteal; (3) Pyloric. From the standpoint of a practical clinician this is a very satisfactory classification. The term extra-osteal is applied to growths not found in the cardiac and pyloric areas, and therefore includes only those growths which involve the anterior and posterior surfaces and the greater curvature of the stomach. Since cardiac cancer is seldom amenable to radical operation, the scope of this paper will cover only the extra-osteal and pyloric varieties.

EXTRA-OSTEAL CARCINOMATA.

In this form, as in practically all other forms of cancer, the patient is above forty years of age and as a rule there is history of no decided digestive trouble prior to the onset of the carcinomatous period. The onset is usually described as sudden. The loss of appetite in the majority of instances is decided, persistent and without treatment, progressive, and often there is marked repugnance to meats and fats. There is also progressive emaciation of the muscular tissues. There may be presence of tumor during the operable period. There is usually, but not invariably, a diminution or absence of hydrochloric acid in the stomach contents. Microscopical examination of the fluid from the fasting stomach will show pus, blood, and may be cancer cells. Chemical examination of the feces, after the patient has abstained from meats three days, if done repeatedly, may reveal the presence of occult blood. Pressure and burning in the stomach, without pain, exists in some cases, while in other cases pain may be persistent. No gastric stagnation is found in this form. Achylia, with the presence of occult blood, says Boas, speaks strongly for latent extra-osteal carcinoma.

The following case is illustrative:

Case 1.—P., a widow, aged 66 years. Had

good digestion up to 8 months ago when she began to have a burning in the epigastrium, with following loss of strength weight and appetite. Examination revealed partially movable tumor in the epigastrium, which did not rise and fall with respiration; inflation of stomach rendered the tumor less distinct. There was no food stagnation. Exploratory laparotomy revealed carcinoma of the posterior wall of the stomach too far advanced for excision. Had this case reported for examination 3 months earlier, it could in all probability have been diagnosed and successfully removed.

THE PYLORIC FORM.

Fully 80 per cent. of gastric carcinomata are of this type and they occur as either

1. Primary carcinoma of the pylorus, or,
2. As carcinoma engrafted on chronic ulcer cicatrix.

In the primary form there is the usual history of age beyond 40 (exceptionally earlier), prior good digestion, rather abrupt onset, and without treatment, progressive loss of muscular tissue and appetite. Occult blood may be demonstrated in the stools of stomach contents. The distinguishing feature of this form is the presence of food stasis, and periodical vomiting, following cramp-like pains. The vomited contents consists of food taken on preceding days. Congo red pepper shows a dirty blue and not the distinct blue given in the presence of free hydrochloric acid; while Dimethyl fails to give the cherry red. Sarcinae are absent, and lactic acid and Boas-Oppler bacilli often abundant. The following case is fairly typical and emphasizes the importance of early recognition, if successful surgical intervention is to be hoped for.

Case 2.—Mrs. R., aged 51, mother of five children. Digestion good until nine months ago, when anorexia, with burning in the epigastrium began and later pain and vomiting after solid food but had comparative comfort after liquids. At time of examination, which was six months after onset of symptoms, a partially movable tumor was detected, in the medium line two fingers-breadth above the umbilicus, which on inflation of the stomach pushed over to the pyloric area. There was absence of free hydrochloric acid, presence of lactic acid and Boas-Oppler bacilli. Operation by consulting surgeon, revealed pyloric cancer too far advanced for successful operation. Gastro-enterostomy was done and patient made an uneventful recovery, soon ate well and had gained 5 pounds when she left the hospital 3 week later. Temporary improvement after gastro-enterostomy generally takes place in these cases but earlier

* Read before the Tri-State Medical Society at Charleston, S. C.

diagnosis, with pyloectomy is what we should strive to attain.

CARCINOMA DEVELOPING ON CHRONIC ULCER.

There are two classes of cases:

1. Those in which carcinoma develops on existing ulcer, and

2. Those in which the carcinoma develops on the cicatrix of a pre-existing ulcer. Practically all these cases, if questioned carefully, will furnish a pre-ulcer history. In the cases where cancer develops on an ulcer cicatrix, there is an interval of several years between the disappearance of the ulcer signs and the appearance of the symptoms of carcinoma. Even when cancer has begun to develop there may be, in fact there usually is, present an excess of free hydrochloric acid in the stomach contents, but the acid gradually diminishes as the malignant process advances. Owing to the pyloric stenosis, there is food stasis and consequent vomiting of food taken on the preceding day. In the fasting stomach, sarcinae and yeast cells are usually present, in the stomach contents or occult blood in the stools from time to time. In those where cancer develops in latent ulcer, the history of the case is of little value in making diagnosis. In any of these cases, a palpable tumor in the pyloric area may appear during the operable period. Emaciation, loss of strength, anaemia are symptoms common to this type.

The following case shows the characteristic course of cancer developing on pyloric ulcer.

Case 3.—P. M., a shoemaker, aged 51. Three years previous to appearance for examination, had epigastric pain, nausea and vomiting, after ingestion of solid food. Discomfort was much less after taking solid food. Later had hematemesis. Gastric analysis showed presence of free hydrochloric acid, sarcinae and yeast cells. Lavage gave evidence of food stagnation. Operation was advised and refused. Three months later a tumor was palpable in the pyloric region and free HCl had by this time markedly diminished. Patient died some months later. Had this patient accepted operation when advised, it is probable that his life might have been saved, by pylorectomy. In pyloric cancer such results are being obtained that no conscientious physician should fail to give his patient the advantage of an early operation. Perhaps 80 per cent. of pyloric cancers develop an ulcer base, and this fact has been demonstrated by the Mayes, Monahan, Robson, Kocher and their associated internists. In pylorectomy, Kocher and Robson report a mortality of 15 per cent.; the Mayes, a mor-

ality of 10 per cent., with only one death in the last 25 cases.

I venture the assertion that the surgeons present in this meeting, if we could gather their experience, would tell us that more than 50 per cent of the cancer cases which come to them are beyond the operable period. In the past 8 years in 1252 recorded cases of gastro-intestinal disease I have found gastric cancer was present in 24, and all but 4 of the 24 were too late for radical operation.

I realize that we, as physicians, often do our full duty in striving to reach a diagnosis in cancer of the stomach, during the operable period, and after emphatic advice the patient refuses operation. In such instances we are not to be censured, for we have done our part, still it is not just to cast too much aspersion on the patient. He has been told for years that gastric cancer is an incurable disease; he has seen the cases die, while the physician stood by with folded arms. The great mass of the laity do not know what is being done nowadays, by surgeons in the way of saving and prolonging the lives of those who suffer from internal cancer. It is therefore incumbent upon us as surgeons and physicians, to tell them of these results, show them a few living examples and in a few more years, they will go as readily to the operating table for gastric cancer as they now do for appendicitis or cholecystitis.

As general practitioners, we as often treat too long with drugs, cases of so-called indigestion, which if studied and examined in accordance with modern methods, would show either unmistakable signs of cancer or present a symptom group, which would point with such strong degree of probability toward cancer, that an exploratory incision should be advised and insisted on. As internists and surgeons, we are often half-hearted an unemphatic in advising our patients to submit to the knife; we often postpone, for weeks and months, telling the patient his probable condition. I believe in conservatism, but I do not believe in procrastination in so serious a matter; a prompt diagnosis and a good surgeon are essential to clear up the situation.

The Sanatorium Treatment of Tuberculosis.*

By Dr. L. B. Morse, Chimney Rock, N. C.

In this short paper the writer will not try even to attempt a resume of the various measures that have been advocated for the relief of tuberculosis, nor even to enumer-

*Read at the recent meeting of the Rutherford County Medical Society.

ate the methods of treatment now in vogue. Much of the detail, as well as the underlying principles, in the treatment of this disease, is now thoroughly understood by a large body of the medical world, likewise by an increasing proportion of the laity.

Probably there is no disease that has been so much discussed, both in and out of the profession, in recent years, as has the prevention and treatment of tuberculosis. Nothing short of startling was the remarkable awakening of millions of people to the knowledge that tuberculosis, instead of being an incurable, was (in its earlier stages at least) a curable affection. This sudden realization of its curability was naturally followed by a thorough discussion of the principles involved in its treatment. Even the Brehmer Tripod, viz: the greatest amount of food, rest and fresh air, upon which the Father of the modern therapy of tuberculosis, declared that all treatment must stand; became a familiar expression. Latterly, too, the well-nigh unanimity of opinion as to the value of tuberculin in the earlier stages, is quite generally recognized. The principles of specific medication are well enough understood by a considerable proportion of the medical profession to justify its administration in suitable cases. All too commonly, however, the recognition of these principles; dietetic, hygienic and specific, do not get the results hoped for. Good advice, even when carefully given; has been indifferently carried out. The patient for a while improves so rapidly as to almost astonish the medical attendant; then something goes wrong. Some unfortunate circumstance happens. The patient so well started in the "cure" has had a "set back." It may have been overexercise, some exhausting social function, some worry or emotional strain; or, perhaps an unwillingness to follow out to the letter the instructions of the physician.

It has been said that American patients are much more inclined to seek medical advice than are people of other nationalities; and, per contra, after getting it, much less inclined to follow it. It is one thing to properly advise a patient; it is another, and vastly more difficult thing, to have the advice carried out. There are two very important reasons, in the writer's judgment, to explain the great difficulty of having one's medical advice conscientiously followed in the earlier stages of pulmonary tuberculosis; first, is the chronicity of the disease, and the second is the unwillingness on the part of patients to acknowledge to themselves that they really have tuberculosis, indeed this unwillingness, early in the affection, amounts to nothing short of

disbelief. In patients suffering from serious, but acute, maladies, directions are carried out to the letter; but, in chronic affections extending over years, is it strange that the will flags under the prolonged and unremitting discipline? Yet, "eternal vigilance" is the price of a cure from this, the most insidious of all human ills.

The unwillingness to call the affection by its right name, assuming that they have been so informed, is likewise a serious block in the discipline of these unfortunate people. It is vastly wiser for the medical attendant to frankly tell them in the very beginning the nature of their affection. If it brings with it a certain shock, it just as certainly insures a more faithful and conscientious obedience to instructions. How can a physician expect a patient to observe the rigorous life necessary to bring about his recovery, when the latter is told that he is suffering from a "hard cold on the lungs," a little "chest, or throat trouble," and the like?

But, granted that the patient has been apprised of the nature of his affection, and that he has received the best possible advice; the duties of a general practitioner commonly preclude the possibility of his seeing these patients oftener than once or twice a week, and in the open health resort rarely is he under observation more than a few minutes daily. A well-nigh infinite number of little things are constantly arising in the life of the consumptive that can only be met and corrected when the patient is actually under the eye of his physician. There is probably no disease where the details count for so much. The struggle is a long and a serious one; and it is the handling of these "little things" that weighs so heavily in the balance, for or against a cure from this disease. It must be obvious that only at the sanatorium, is it possible to secure these conditions. Errors in life are constantly detected that would hardly be elicited by the casual consultation, it matters not how searching and conscientious were the interrogations.

In the matter of diet alone, it is possible to determine with more certainty the foods that agree with each individual. A full, generous diet is most essential, but patients whose digestive powers are lowered will have to be encouraged to take more food than is prompted by the dictates of their appetites. It is my experience that nearly all such patients are capable, of at least a small degree, of stuffing, though there are some who can never over-eat. In practicing supralimentation, great care must be used that excessive food taken is limited to the simplest and most easily digested sorts. If this last precaution is taken, it is surprising to note the marked gains in weight and

consequent improvement resulting therefrom. Relaxations, though, are so easy (I should say, the rule) and unless the patient is kept up to his task, he falls back to former habits. The accurate keeping of weight charts is an incentive to weight-gaining.

In the matter of fresh air and rest, for one can hardly consider them separately, the accumulated experience of a sanatorium must redound to the distinct benefit of the patient. "It is so much easier to do what others are doing," is a familiar expression. The patient at home, or, indeed, in the usual resort boarding house, lacks this valuable incentive of example, unless perchance it be at a place where one physician segregates his patients, a plan most to be commended, constituting the nearest approach to the ordered life of a sanatorium.

One of the first lessons that a patient must learn is to disassociate fresh air with exercise. The uninitiated patient invariably, and most naturally, thinks of fresh air as an accompaniment of walking, climbing, riding, sports, lung gymnastics, etc. Instead he must, for a long time at least, associate it with rest; rest, not only of the body generally, but as well of the lungs and throat. It is rather a singular thing that as long as the profession has been taught the principle of "rest to the part inflamed," first advocated by Hippocrates, that lung gymnastics have been so long and persistently advocated in pulmonary phthisis. Generally speaking there are two periods when a patient may safely indulge in lung gymnastics; one is before he contracts tuberculosis, and the second, after he has recovered. During the stage of the activity of the disease, deep breathing is distinctly contra-indicated. In laryngeal tuberculosis, throat rest is equally important, and the results from regularly using the writing pad, more than compensate for the deprivation, which, however, decidedly lessens in a short time. Excited conversation is, with all these people, something to be positively forbidden. A silent hour, or half hour before meals, preferably while lying down, insures a healthier appetite and strengthens the digestion and reduces nervousness.

The decree and persistence of bodily rest must be determined largely by the symptoms, by the individual and by the results obtained. It is just here that we encounter one of the most difficult features in the handling of the tuberculous. The difficulties arise, on the one hand, from our inability to measure the exercise; on the other, from the patient himself. The patient who is just beginning exercise will

almost invariably over-exercise. When in doubt as to the quantity; "err on the side of rest." Assuming however that the patient is willing to follow out orders, every physician knows how difficult it is to nicely regulate it. Walking is the ideal exercise, as the muscles most used are below rather than above the waist line. The elements entering into it are, on the one hand, the time consumed and the grade and distance covered; on the other, the varying condition of the patient's physical vigor from day to day, together, of course, as stated before, with the results obtained.

In order to meet these needs, there should be in connection with every sanatorium a system of graduated paths, with seats at frequent intervals, and perhaps shelter stations with distances marked. At my sanatorium I have worked out such a graduated scheme of exercising paths; the first and lower ones are level paths, others are made on 3, 5, 7 1-2, and, for short distances only, 10 per cent grades. All paths ascend from the sanatorium; and, conversely, descend, toward it, the value of which is seen later. The paths should be smooth and dry, and need only be wide enough for one person.

Exercise should be taken during the afebrile part of the day, and sufficient time should elapse before meals for perfect relaxation. The first exercise taken should be on level paths, slow walking is imperative, and seats should be at such frequent intervals as to admit of alternate rest. Day by day the quantity of exercise can gradually be increased. The test of all exercise is the results obtained. Shortly the patient is allowed to walk the steeper grades, where likewise resting places are frequent. The distances walked as the weeks and months pass naturally become greater and greater, until in many cases, several miles are covered daily, when of course more latitude can be allowed. Exercise too should be limited to a point short of fatigue, not to it. "The healthy man sits down because he is tired; the consumptive should sit down so as not to become tired." It is just here that the value of an ascending grade becomes manifest. If, perchance, the patient has walked too far, he thus has the advantage of a descending grade for the remaining distance; whereas if the outgoing path were a descending one, the danger is most obvious. Exercise of any moment should not be instituted when the patient's temperature rises above 100 degrees Fahr. When the maximum falls below that point, it may be commenced.

As high a value as I place upon rest during the active stages of pulmonary tuberculosis, hardly less is the value of exercise

during convalescence. The stimulation of the appetite and digestive functions, the marked improvement in the heart's power, the more natural action of the skin and kidneys, together with the favoring of sleep, are some of the benefits which almost certainly can be expected. All this means increased resistance, and a lessening of the likelihood of a later recrudescence of the disease. But it must not be forgotten that, if exercise is capable of doing much good, it is equally potent for harm, and I know of no way of regulating it so certainly as by some such graduated system of walks and paths.

In medicinal treatment likewise it would seem that the closer observation possible should be an advantage, more particularly in the administration of specific treatment.

Excellent results are being obtained from the treatment of this affection both without and within the sanatorium; but, other things being equal, the closer observation and control of the minutae of daily life and habits of the patient, bring about the quicker and more certain recoveries from this disease.

The Post-Hospital Management of a Surgical Patient.*

By Stuart McGuire, M. D., Surgeon-in-Charge
St. Luke's Hospital, Richmond, Va.

Volumes have been written on the preparation of a patient for an operation and on the treatment of a patient immediately after an operation, but it is difficult to find anything either in text-books or journals on the management of a case after the patient leaves the hospital and returns home. The importance of this subject to the public and to the profession will only be appreciated after a thorough consideration of many different factors.

Change in the Attitude of the Public to Surgery.

Not many years ago a surgical operation was considered, in the words of the marriage ceremony, as something not to be entered into unadvisedly or lightly, but discreetly, soberly, and in the fear of God. Today, however, it has come to be regarded as a comparatively trivial event to be sandwiched in between business engagements and social pleasures, and the principal dread is the surgeon's fee. In the old days it was understood that a patient requiring a serious operation would have to remain two or three months in a hospital. Several weeks were usually spent in preparation for the operation, and after the ordeal was over

the patient was kept under after-treatment until convalescence was well established. At present, patients enter the hospital one day, are operated upon the next, begin to ask when they can go home before they stop vomiting, and usually are permitted to leave the hospital before it is wise for them to do so.

Reason for Short Stay in Hospital.

Nearly all surgeons admit the injurious results which frequently follow the premature discharge of a case from the hospital, but most of them try to evade responsibility by attributing the evil to the unreasonable insistence of the patient to be permitted to return home. The fault, however, is not primarily with the laity but with the profession. Patients would consent to longer detention in the hospital just as submissively today as they did some years ago, if they believed it to be necessary. The fault is with a few surgeons who, for various reasons, have entered into a competition to see who can get their cases out quickest, and have thereby set a precedent which other surgeons have followed. They have been actuated partly by a wish to save the patient time and money, but also by a desire to advertise themselves. The public is prone to estimate the ability of a surgeon by the apparent rapidity of the recovery of his patients, and to make comparisons between different operators on the basis of the length of time they keep their patients in the hospital. This is not surprising, as even some of the profession do not seem to fully realize the fact that, all things being equal, a wound will not heal quicker for one man than it will for another, and that the number of days a surgeon keeps a patient in bed is not a measure of his surgical dexterity, but of his surgical judgment. Often the surgeon who keeps his patients longest will get them well quickest.

Contrast of Condition in Hospital and at Home.

In order to appreciate the dangers to a patient of premature discharge, it is necessary to contrast the conditions of hospital and home life. The change is as decided and the influence as great to either sex, the man on returning home being confronted by financial worries and business complications, and the woman by family cares and domestic duties.

By way of illustration, we will take the case of a woman. While in the hospital she has no responsibility and her life is an absolutely regular one. She has comforts and conveniences, which are often as new as they are delightful. Her room is clean, well heated, and tastefully furnished. Dainty

*Read before Tri-State Medical Society, Charleston, S. C.

meals are served with clock-like regularity; a bed-side table filled with books whiles away the weary hours; and an electric bell commands the service of an attractive and efficient nurse. When convalescent, a wheelchair makes accessible cool corridors, or the elevator quickly and smoothly carries her to roof gardens flooded with sunshine. Cheerful visitors bring in outside news. Other patients recovering from more serious operations inspire her with courage, and she emulates their example and tries to surpass them in rapidity of progress. It is like playing a game to see who can get well first. Above all, she is conscious of being under the watchful eye of the surgeon, and appreciates the fact that complications, if they occur, will be promptly corrected. In short, she lives in an atmosphere of hopefulness, of restraint, and of confidence.

Now compare the condition of this woman when she returns home. At the very outset, she has to meet either injudicious sympathy or unreasonable expectations. Sometimes her friends and relatives, by a combination of commiseration and indulgence, may induce her to believe that she has been the most unfortunate woman on earth, and she, therefore, is entitled to lead a life of invalidism for the remainder of her existence. Or again, her husband and family may show in their manner, if they do not express it in words, the conviction that she ought to be in good running order after so much money has been spent in repairing her, and as a consequence, she feels impelled to exert herself to discharge duties for which she is not physically competent. During the woman's absence from home the domestic economy often gets sadly out of gear. Undesirable relatives have come to make visits; servants have grown slack and impudent; children have been spoiled and pampered; and the husband's sexual appetite has not been gratified. As a consequence, in the first few days after her return, she has to snub her mother-in-law, discharge her servants, clean her house, cook her dinner, spank her babies, and resist or yield to her husband's advances.

If she lives in the country, as is often the case, the contrast between hospital and home life is even greater. The house is usually a frame structure, with no heat in the halls, and the rooms warmed by open fires which roast one side while the other freezes. The servants are unreliable and ignorant, as competent ones have long since sought the cities. Food is usually indigestible in character, and monotonous in variety. Suitable exercise is difficult to practice because roads are rough or muddy, and there are but few objects of interest to visit. A bath can only be obtained by bringing in a

washtub and heating water in a kettle, and an evacuation of the bowels can only be effected by an excursion to the garden, along a grass-grown path overlung with boxwood bushes, and by the exposure of a vulnerable portion of the anatomy to the chilling wintry blasts. Is it a wonder that the woman becomes neurasthenic and fails to get well? The day will come when country life will be as happy and healthy as pictured in books, but this will not be until increased prosperity leads to the erection of new buildings, with steam heat, acetylene light, and proper toilet arrangements; not until the creation of good roads and the perfection of automobiles lead to easy transportation; not until the installation of telephones, the perfection of phonographs, the extension of free delivery of mail, and the increased production of good magazines at small cost lead to betterment of the social conditions and mental activities of rural communities.

Necessity of Post-Hospital Treatment in a Surgical Case.

What has been said with reference to the short stay of patients in the hospital, and the conditions which frequently exist at home which work adversely to their recovery, makes it plain that those interested in their welfare should thoughtfully consider the situation and endeavor to remove the evil. The remedy obviously consists in the patient remaining longer under the care of the surgeon, and on returning home, to be placed under the close supervision of the family physician.

Patients should be Required to Stay an Adequate Time in the Hospital.

A case should not be detained unnecessarily long, as it is not only a waste of the individual's time and money, but also tends to the creation of invalidism, and the formation of what is termed "the hospital habit." A case should not be dismissed too soon, as failure to secure the expected benefit from the operation may lead to discouragement, which finally results in well established neurasthenia. Convalescence is a question of temperament, and must be psychical as well as physical. People are coming to regard surgeons as mechanics and patients as machines which are to be repaired. They must be taught that the operation is not everything, and that the after-treatment is often of equal importance. They must be made to understand that the operation merely corrects an abnormal condition and puts Nature in a position to effect a cure; that often the first effect of an operation is injurious, and that the beneficial results are only experienced after the system recovers from the shock and readjusts itself to new

conditions; that sometimes it takes weeks, months or even years for this to be accomplished. They must be impressed with the fact that surgical patients are not well because their wounds have healed, but should remain in the hospital until they have regained to a certain extent their physical strength and nervous equilibrium, and that after returning home, for a time they should lead a life of prudence and restraint.

Patients should be Properly Cared for after Reaching Home.

The surgeon usually attempts to accomplish this by giving verbal instruction to patients when they leave, and by subsequent correspondence with them, but it can be more effectively and properly done by referring the patient back to the family physician. The reason instructions to patients are not satisfactory is because they cannot cover all eventualities, and are frequently not understood by the patient. When a surgeon takes charge of a new case he is on his mettle to make a good impression and to solve the diagnostic problems presented. There are usually consultations with clinicians and laboratory men, and for a day at least, the case receives more attention than any other patient in the hospital. The diagnosis made, the operation performed, the danger period passed and convalescence established, it is only natural that the surgeon's time and thoughts should be occupied with more recent cases, so when the time comes to say good-bye, and give parting instructions, he simply utters a few perfunctory injunctions, tells her to be patient and prudent and to write him if she has any untoward symptoms. The patient's expectancy and disappointment are often apparent, but she hesitates to ask the many questions which are uppermost in her mind for fear of wearying or irritating the busy man, the value of whose time she has been taught to respect.

The reason subsequent treatment by mail is not satisfactory is because patients usually fail to give important facts, and either exaggerate or underestimate their symptoms. Also because the surgeon cannot remember their idiosyncrasies and peculiarities, and even if he prescribes correctly, his remedy lacks the addition of personal suggestion which is so essential to make it efficient.

How much better it would be if the patient was told when she left the hospital that the operation which had been performed had satisfactorily corrected the condition which had given rise to her symptoms, but that she was not well and that it would require some months of proper living to restore her to full health and activity; that during this time it was important that

she should be under the watchful care of the family physician, and direct her, on returning home, to place her case in the hands of her family doctor, promising to communicate with him and describe the nature of the operation which had been done, and afterwards, if necessary, to write him from time to time, and make suggestions with reference to the details of her after-treatment. This would safeguard the patient's future welfare, and would overcome to a large extent the growing feeling on the part of the general practitioner that he is unfairly treated by the surgeon. The family doctor thinks, if he does not say—"I was called to one of my patients and found she needed a surgical operation. I made a diagnosis and received \$2.00; the surgeon did an operation and received \$200.00. It is not right that he should get all the money and all the reputation, while I, who played such an important part in the case, should receive so little pecuniary compensation and professional credit." This sentiment has manifested itself in certain parts of the country by a demand for the payment of a commission or the actual division of the fee, a policy which, if carried to its logical conclusion, would be disastrous to the patient and demoralizing to the profession. Fortunately the South has not yet reached this stage of commercialism, but a condition exists which may bring it about if it is not appreciated and corrected. While a division of the fee between the surgeon and the physician is unethical, as it is practically a premium on dishonesty and incompetency, a division of the work, with proper compensation to both parties, is not only ethical, but for the best interests of the patient and profession.

The Surgeon should have Charge of Post-Operative, and the Family Physician of Post-Hospital, Treatment.

Except under unusual circumstances, few conscientious surgeons are willing to turn patients over to the family physician immediately after a serious operation. Complications are often so sudden and dangerous, symptoms so slight and misleading, diagnosis so difficult, and correct treatment so essential, that no one except a man who has had long and constant experience in the management of this special line of cases is competent to have charge of them. It is unfortunately true, however, that some surgeons take more interest in the operation than they do in the patient, and attach more importance to the mortality of the one than they do to the morbidity of the other. When, therefore, the danger of the operation is over, and treatment consists in regulating the various functions of the body,

restoring lost flesh and strength, and re-establishing nervous and mental equilibrium, the family physician becomes the safest adviser.

With the rapidly increasing amount of surgery being done and the consequent number of convalescent patients under treatment, an educational move ought to be instituted for the study of the many peculiar factors involved. Papers ought to be written and discussions ought to be participated in by both surgeon and family doctor, taking up the various details and discussing them from their different standpoints, until finally there is evolved a consensus of opinion with reference to the very many important points in the treatment of these patients. These should include the question of a proper dietary; of the best method of regulating the bowels; of the best manner of treating bladder irritation; of the number of hours of sleep, and of the necessary periods of rest during the day; of the amount of exercise that is permissible, whether steps are injurious, how soon the sewing machine may be employed or housework taken up; the question of driving, riding horseback, dancing, swimming, and athletic contests; the sort of clothing to be worn, whether corsets are injurious, or an abdominal binder necessary; the question of prudence at menstrual periods and the relief of pain often experienced at that time; the treatment of headaches, the administration of tonics, nervines and hypnotics, and how often baths should be taken; the use of massage and electricity; the protection of wounds; the employment of douches; the use of tampons; the period at which sexual relations may be resumed—these and a hundred other questions all require consideration in order that there may be no division of opinion. Not until satisfactory relationship is effected between the surgeon and family physician, on either the line suggested or some other substitute, will there be harmony in the profession, and the greatest good accomplished to the greatest number of patients.

Life of the Tubercle Bacillus Outside of the Human Body.*

By John Roy Williams, M. D., Greensboro, N. C.

In considering this subject, I have special reference to the length of time the tubercle bacillus will live outside of the human body. The importance of this, from the standpoint of prophylaxis, is evident at a glance, and it is doubtful in my mind if it has been given enough attention by the profession

generally. It is largely due to the lack of consideration of this important subject that the layworld has become possessed of an erroneous idea of the dangers of a tubercular infection, and it is incumbent upon the medical profession to correct this mistaken opinion.

The average layman has the opinion that the tubercle bacillus lives indefinitely outside of the body, and that they continue to grow and multiply in numbers. That they move about of their own accord, and by the assistance of the winds, etc.; and that they are to be found everywhere. That a single case of tuberculosis in a neighborhood is apt to infect the entire community because of these supposed conditions. That the air of exhalation is infectious and dangerous, meaning by that, the air exhaled by the consumptive. Also, that in the neighborhood of the consumptive's home, the tubercle bacillus is found floating around in the air, and that the dust of the streets is laden with these living germs.

It is hardly necessary to say that the tubercle bacillus has no motion of its own accord, and that its being carried about by the winds is very limited at most. We find infected air only and solely in the infected room of the careless consumptive, and we find it then only following the pernicious habit of dry-cleaning. The air of exhalation is sterile and harmless, and there is no physician or scientist, who, having even a slight knowledge of the bacteriology and pathology of this disease, will dispute that fact. To contend to the contrary is but an expression of ignorance.

The tubercle bacillus is not found floating about in the air around or near the home of the consumptive, even if the consumptive should be a careless one. No competent observer has ever been able to demonstrate to the contrary. The living tubercle bacillus has never been found in the dust of the streets. Only once has any observer claimed to the contrary, but since he has also claimed to have obtained a culture from dead tubercle bacilli, we can not take any statement of his as being worthy of consideration.

There are certain circumstances which play an important role in the propagation of this particular species of bacterial life, the tubercle bacillus. A better working knowledge of these circumstances, or I had better say, these conditions or environments, would make us more correct in our statements to our patrons and fellowman, as to the best ways of preventing this disease, tuberculosis. It is a certainty that the spread of tuberculosis is directly dependent upon the life period of the tubercle bacillus outside of the body, and the presence or

*Read before Greensboro Academy of Medicine, Dec. 18, 1908; and the Guilford County Medical Society, Jan. 5, 1909.

absence of the conditions which favor that life. It is as certain that dead tubercle bacilli cause no disease as it is that "dead men tell no tales." It is, therefore, important that we know the conditions which favor the life of the tubercle bacillus outside of the body, in order that we may eliminate them; and it is equally important that we know the conditions which favor the death of the tubercle bacillus outside of the body, in order that we may bring them to bear.

Outside of the body, the tubercle bacillus is found chiefly in sputum, feces, urine and abscess discharges. In sputum they are numerous; in feces they are few or many; in urine they are scarce as a rule, while in discharges from tuberculous abscesses they are so few that it is with extreme difficulty we can demonstrate them by staining and the use of the microscope.

The majority of the tubercle bacilli in sputum are dead before the sputum is raised. Kitasato, a Japanese scientist, has demonstrated that fact by experimental research, showing that about 95% of them are found to be dead when raised. The conditions known to be requisite to the life of the tubercle bacillus tend to prove this claim. In the human body it is known that living organic matter and an abundant supply of oxygen are necessary for the life of the tubercle bacillus. These conditions are not met with in the caseous areas. The majority of tubercle bacilli found in phthisical sputum come from the caseous areas, which have neither blood nor lymph supply. In these areas, there is no living organic matter, and deprived of lymph and blood, the germs are robbed of their necessary oxygen, and in consequence death of the germs must necessarily supervene. Also, in such areas the bacilli are being constantly bathed in their own poisonous excretions, which, combined with the other conditions present, facilitates their death. So, starved of food and aeration, bathed in its own destructive poison, it soon dies.

The living tubercle bacilli found in tuberculous sputum do not come from the caseous areas. They are cast off from those tissues surrounding the caseous areas, tissues which still have life, blood and lymph supply. There the germs find conditions necessary to life. They have food, aeration, and are not being constantly bathed in their own poisonous excretions, as what poisons are eliminated by the germs are promptly absorbed into the circulation. This absorption explains the acuteness of the toxæmia found in early stage cases. In such cases the tissues are but recently involved, have not reached the stage of necrosis, their blood supply is still estab-

lished, and here, the germs being well fed and aerated, manufacture their toxin in quantity.

But I fear I am drifting from my subject. It is the length of time the tubercle bacillus will live in sputum outside of the body that I wish to consider most. In the outset, you may know that the bacilli will live longer in dry than in moist sputum. Putrefaction of dry sputum is slow, compared to that of moist sputum. The germs of putrefaction multiply more rapidly and hasten decomposition in a moist media than in a dry one. Putrefaction of sputum is very deadly to the tubercle bacillus for two reasons. First, because the products of putrefaction are very toxic to the tubercle bacillus; secondly, the putrefactive germs multiply more rapidly during such a process, and soon deprive the tubercle bacillus of its aeration, which latter condition has been spoken of as "crowding out."

When the sputum dries, the bacilli become encased in an impervious capsule of desiccated mucous, which protects them from extraneous conditions which favor their death, the chief condition being the attack of the putrefactive organisms. It is, therefore, obvious that tubercle bacilli will live outside of the body longer in dry sputum than in moist sputum. Therefore, our first lesson is never permit the sputum to dry and we will hasten the death of the contained bacilli.

Light is deadly to the tubercle bacillus. Direct sunlight is rapidly fatal, in fact, as a germicide, there is nothing better, with the exception of fire. The length of time necessary for direct sunlight to sterilize sputum is dependent upon the condition of the sputum. It is more rapid in moist than in dry sputum. Sputum, when moist, is more rapidly penetrated by sunlight; and since sunlight has but slight bactericidal action on putrefactive germs, and in fact seems to conduce to putrefaction, then it must follow that when moist sputum is exposed to direct sunlight, putrefaction is more rapid and all of the effects of putrefaction, above referred to, are brought into play, and the life of tubercle bacillus is accordingly effected.

Cornet¹ says, "it has long been known that light is injurious to germs. According to Koch, tubercle bacilli die within a period varying from a few minutes to a few hours, depending upon the thickness of the layer in which they are exposed to the direct sunlight. The same effects result from exposure to diffused light for an appreciably longer time."

Strauss² reports that "flourishing bouillon cultures of virulent tubercle bacilli, exposed for two hours to the summer sun, are found

to have perished." "Cultures in thin smears on glass, lose their virulence in half an hour under same conditions." I, personally, when at the Winyah Sanitarium, when making my culture transplantations, allowed cultures to be exposed to direct sunlight for a minute or two, and never was I able to get such a culture to grow when placed in the incubator.

Latham³ says, "diffuse light will cause the death of the bacilli, but this is more readily accomplished by free ventilation and direct sunlight." Ransome⁴ says that under the healthy conditions of a dry pure subsoil, good drainage, free ventilation and plenty of sunlight, the sputum may no longer be infective even before it becomes dry and is converted into dust." Pottinger⁵ says "the surest enemy of the tubercle bacillus is light." Bonny⁶ reports that "directsunshine is found capable of rendering bacilli inert after a few hours." He also says, "Mitchell and Crouch, of Denver, after an elaborate investigation, found dried sputum to be quite virulent up to twenty hours after exposure to direct sunlight."

These reports, which have followed practical observations by the quoted observers, show that direct sunlight will disinfect sputum in from a few minutes to thirty hours, depending upon the thickness of the mass, and as to whether it is dry or moist. They also show that diffuse light requires a longer time. I could also quote many observers who show that sputum kept in dark places requires many months to make in innocuous. From this, we can see and know that if we prevent the drying of sputum, subject it to direct sunlight, or to diffuse light, the life of the contained germs is short at the longest. From this we have information upon which to build our instructions.

The tubercle bacillus in faeces, urine and abscess discharges lives but a short time outside of the body. Putrefactive changes in the excretions are very rapid, and kills the contained germs very quickly.

The tubercle bacillus does not increase in numbers outside of the body. There is not one of the conditions necessary for this increase, which is found outside of the body. Neither proper food nor temperature are to be found; and the omnipresent saprophytic organisms found in abundant numbers everywhere the germs may be deposited, deprive the tubercle bacillus of its necessary aeration. Cornet⁷ says, "It is therefore illogical to speak of a place or a dwelling as saturated with the accumulated growth of years of bacilli."

References:

1. Notnagel's Encyclopedia of Practical

Medicine. Amer. Edition.

2. Ibid.

3. Latham. Pulmonary Tuberculosis.

4. Ibid.

5. Pottinger. Pulmonary Tuberculosis.

6. Bonny. Pulmonary Tuberculosis.

7. Notnagel's Encyclopedia of Practical Medicine. Amer. Edition.

Mesenteric Thrombosis.*

By Charles T. Harper, M. D., Wilmington, N. C.

The literature on the subject of mesenteric thrombosis is not very voluminous, nor have the standard text-books on medicine devoted much of their space to enlighten the student on this very serious though rare and interesting pathological phenomena.

It's only within the past few years that the attention of the profession has been called to the reported cases of this diseased condition of the mesenteric blood vessels.

The first we find in the literature on this subject is from the pen of that eminent pathologist, Virchow, who reported and described three cases in 1847.

From that period the disease has received more or less attention from Litten, Neutra and others, whose writings have partially paved the way for a more accurate clinical diagnosis.

In this paper I have no new pathological discoveries to report, nor accurate diagnostic symptoms whereby the disease can be readily recognized, it being my intention to bring this subject to your notice that in the discussion, which I hope will follow, some one whose experience has been greater than mine may impart some information that will be of benefit to the profession.

I make use of the word, mesenteric thrombosis, not to differentiate the symptomatology of occlusion of the mesenteric arteries and the mesenteric veins, but to treat the two conditions as one on account of the almost insurmountable difficulty of making a clear clinical diagnosis between them.

This disease of the mesenteric blood vessels is an infrequent one, and is often overlooked by the profession on account of the difficulty in making a diagnosis while the patient is living.

The disease can be divided into two groups, acute and chronic, and the first group is by far the larger and is composed of the cases of sudden onset, often at a time when the patient is apparently in full health.

The second group is formed by cases of insidious onset and chronic, sometimes remitting symptoms, by cases having no symptoms referable to the abdomen during

*Read before the Charleston meeting of the Tri-State Medical Association.

life, and by cases where spontaneous cure results.

The tendency of writers is to consider cases of arterial embolism as forming the acute group, and those of venous thrombosis as making the bulk of the chronic cases.

In the cases reported by Jackson-Porter and Quinby in 1894, sixty-four per cent. of the cases occurred in males and thirty-six per cent. in females, and fifty per cent. of those cases occurred between the ages of thirty and sixty.

The cause of the pathological condition has been ascribed by writers on this subject to syphilis, artheromatous degeneration of the blood vessels, cancer, ulcerated condition of the intestines, amyloidosis (Hemmeter), thrombosis marasmaque, always formed at the situation where blood has the maximum tendency to stasis, parasitic thrombosis in pernicious malaria, and pneumonia, with the blood's tendency to increase fibrinosis.

Hegar has reported a case of uncomplicated obturation of the inferior mesenteric artery, and Loring has published a case of closure of the superior mesenteric artery, which followed multiple neuritis as a terminal process.

In rare cases the embolus had its origin in the pulmonary vein, where clots had been formed as a result of gangrenous pulmonary infarctions.

In cases of venous thrombosis all conditions causing stasis of the portal system plays a causative role.

Secondary venous thrombosis follows cirrhosis of the liver, pyelitis and processes at the liver hilum, which by pressure or the formation of adhesions cause portal stasis.

In several cases also thrombosis of the veins has followed arterial emboli, apparently by the stasis thus brought about.

The location of the obturation may be in the mesenteric artery near its origin from the aorta, or one of its larger branches, or one of its smaller or even the very finest terminal branches may be obturated. In cases of thrombosis of the mesenteric veins it begins in the peripheral branches, originating in the intestines, and extending upwards in these.

It does not begin in the trunk of the portal vein.

The picture found on post-mortem examinations is most varied, dependent firstly on the situation of the obturation, and secondly on the duration of the process.

The peritoneal cavity is filled with bloody fluid or pus, and the peritoneal surface of the intestines as well as the mesentery and omentum is found extravasated blood, peritonitic exudation and fibrin formations.

The mesenteric glands and lymph tissue are often swollen, hemorrhagic infarctions, venous hyperemia, and edema and necrosis may be separated by apparently healthy districts.

The mucosa presents numerous areas of superficial necrosis, and the necrosis may penetrate to the serosa.

Greasy and brownish gray color, numerous ulcers may be found, especially in the lower part of the ilium. The intestines filled with extravasated blood of a tarry consistency.

The wall of the intestines may be immensely thickened and the tissue loose and pulpy, hemorrhagic infarcts of the spleen and kidney. Multiple abscess of the liver, gangrenous appendix, and general arterial sclerosis.

Hemmeter in his very lucid and elaborate treatise on diseases of the intestines says: "The cases of mesenteric thrombosis are rare, and present such great variations in their symptomatology that a typical clinical picture of the condition can not be given."

The onset is usually very sudden, and the clinical situation is controlled by two conditions, namely, either intestinal hemorrhage or intestinal occlusion.

If, he says, the initial symptoms occurred in the midst of an already existing pathological condition of another character it is easily understood how they may have passed by unnoticed.

The principal symptoms are pain, both spontaneous and pressure pain.

In 157 cases reported by Jackson, Porter and Quinby, in which accurate data as to the location of the pain and tenderness was obtained, it occurred in the following locations: General abdominal pain and tenderness 51 per cent.; in the epigastrium 8 per cent.; about the end of the umbilicus 7 per cent.; in the lower abdomen 4 per cent.; in the right hypochondrium 4 per cent.; in the upper abdomen 4 per cent.; in the hypogastrium 3 per cent.; in the right iliac fossa 3 per cent.; in the left hypochondrium 1 per cent.; in the right side of the abdomen 2 per cent.; in the left side 1 per cent.; pain absent 8 per cent. and pain radiating 4 per cent. The character of the pains is colicky, whilst the belly is sensitive to pressure; the spontaneous pains are more or less continuous and are usually ascribable to peritonitis. Nausea and vomiting is usually present, following the pain, tho when the onset of the disease is more gradual this may or may not be present. According to the severity and duration of the process, the vomitus is either normal, stomach contents, bile stained, fecal or finally clear blood. Diarrhœa or constipation, according to Kismaul and Gerhardt, bloody stools are

essential for the diagnosis, though several writers disagree with them, notably Deckart and Neutra. Of the 153 cases, three cases reported in the article by Jackson, Porter and Quinby, obstipation occurred in 22, bloody stools in 19, diarrhoea without blood in 13, normal stools in 12, diarrhoea, later becoming bloody, 10. The stools have the odor of carrion and a dark brown and tarry appearance, or there may be clear blood flowing from the anus. Faulk regards the occurrence of pupera of considerable diagnostic value; hiccoughs is a symptom of minor importance, though sometimes it is the beginning of the end. The temperature usually falls below normal, though not infrequently an increase is observed, which is perhaps due to an accompanying process, such as peritonitis, endocarditis or toxic absorption of the intestinal contents.

There is found a marked increase of the leucocyte count, and a positive iodine reaction and in some cases sugar has been found in the urine, evidence of nephritis of varying degrees of severity and an increased elimination of indoxal.

The diagnosis is admitted by all to be exceedingly difficult, and the more so because the symptoms have the causation as in several other acute abdominal lesions. According to Koster, it is impossible to differentiate between closure of the arteries and those of the veins. Gerhardt makes the following diagnostic postulate: (1) There must be present a source of embolus. (2) There are present copious intestinal hemorrhages, unexplainable by disease of the gut wall or hindrance to the portal circulation. (3) There is a quick and marked fall of the body temperature. (4) Colicky, abdominal pains, which may be very severe. (5) Later distension of the abdomen and free fluid occur. (6) Emboli of other parts may have been present before or may occur simultaneously with closure of the mesenteric vessels. (7) They occur sometimes a large, palpable, blood tumor between the layers of the mesentery. Clinically it is very rare to find all these points present. The conditions which are most often confounded with these cases are those where the obstruction is due to a mechanical hindrance. These are intussusception, volvulus, strangulation by bands or obstructions from gall stones or cancer. Also those diseases which may cause blood in the stool or vomitus must be ruled out, such as gastric or duodenal ulcer, heart and liver diseases, tuberculosis and malignant diseases. We must agree with Hemmeter when he says that in the large majority of the cases the nearest to a recognition of the correct state of affairs that will be made is the diagnosis of intestinal obstruction. The

prognosis in acute cases is indeed very grave, the mortality is about 94 per cent. In the chronic cases and only a few exacerbations are present between which there is a complete absence of symptoms, the prognosis is moderately bad, since in these cases it must be assumed that because of some hindrance a complete collateral circulation can not be formed.

The treatment that we can best offer in the majority of cases is purely symptomatic, strychnine to increase the blood pressure, morphia to allay pain and ergot to stop hemorrhage. Abdominal massage has been suggested to dislodge the clot and spread it into the smaller branches, but in my opinion it is a procedure that is more or less unwise. An abdominal section offers, in my opinion, the best solution for existing disease and the procedure as advised by Jackson, Porter and Quinby in their article on Mesenteric Embolism is the one that will give better results than any I have read. They advise to bring the involved gut well out of the wound, with liberal, sound margin left at either end, and after resection to fix the open ends in the wound well walled off with gauze tampons. If peritonitis is present, a speedy flushing out of the cavity with hot, normal salt solution. With both ends of the intestines thus opened, the distension can be relieved, and the intestines watched for signs of further gangrenous involvement. Later, if the patient's condition permits, a secondary anastomosis of the resected intestinal ends may be pro-found.

Vesical Calculus: Suprapubic Lithotomy: Report of Three Cases.*

By Henry Norris, M.D., Rutherfordton, N. C.,
Surgeon to The Rutherford Hospital.

I wish to report to you briefly today three cases of vesical calculus operated upon by Dr. Biggs and myself by suprapubic lithotomy, with closure of the bladder and primary union in all three cases.

So much has been written on the subject of vesical calculus and so classical are the symptoms that I do not propose to go into them, but will merely content myself by reminding you that a positive diagnosis cannot be made until the stone searcher has been introduced and the stone felt; and that once a stone has been formed in the bladder of too great a size to pass per urethra there is no cure for it except removal either by litholapaxy or lithotomy.

Our own feeling about litholapaxy is that in the hands of a master it is the ideal oper-

*Read before the Rutherford County Medical Society, April 8th, 1909.

ation in most cases, provided that the stone is not too large or too hard. Few general surgeons have a sufficient number of stone cases to become experts in the use of the lithotrite and in the hands of the unexperienced its dangers cannot be overestimated.

Lateral lithotomy has not now as many supporters as formerly on account of hemorrhage, danger of wounding the rectum and ejaculatory ducts and the fact that a large stone cannot be removed by this route without being previously crushed.

Suprapubic lithotomy can be successfully and easily performed by any surgeon of ordinary ability and can be made practically a bloodless operation. Moreover, the sense of sight is added to that of palpation.

The method which Dr. Biggs and myself have adopted, for which we claim no originality, is as follows:

After thorough cleansing of the operative field, the bladder, the capacity of which has been previously ascertained, is irrigated with normal salt solution introduced through a full sized soft rubber catheter. The bladder is then moderately filled with salt solution and the catheter clamped on the end with a hemostat. The patient is placed in the dorsal position with the hips slightly elevated. A vertical incision, from two and a half to three inches long, is made in the median line extending down to the symphysis.

On reaching the prevesical connective tissue this is pulled up and incised, when the bladder is readily recognized. After a careful examination to make sure that the peritoneum has not been injured, the bladder is seized as near its dome as possible with two Allis Forceps, which should not puncture the mucous coat, a transverse incision into the viscus is then made. All bleeding points should be at once controlled and in extracting the stone or stones the manipulations should be performed with as little trauma as possible. It is far better to make a large incision in the bladder than to forcibly extract a stone through one too small. After having satisfied oneself that the bladder is empty it is washed out with hot salt solution and the mucosa is whipped together with fine catgut in a continuous suture. The muscular coat which must be well inverted is closed with interrupted sutures of catgut placed about one-eighth of an inch apart. Fine silk or catgut is used in the serous coat. Unless there is a marked cystitis we believe in completely closing the bladder. A small Penrose drain, the size of a No. 20 catheter, is placed in the prevesical space and the remaining portion of the wound in the parietes is closed in the usual manner.

On the patients return to bed a Cathcart

drain is immediately attached to the catheter which is kept in situ for one week, the bladder being gently irrigated with permanganate of potassium solution one to eight thousand once or twice daily.

The Penrose drain is removed at the end of forty-eight to seventy-two hours and the skin sutures on the ninth or tenth day.

Case 1.—J. B., white, male, age 5 years, admitted October 17, 1906, is a fairly typical calculus in a child. History is as follows: The child had been treated for about a year for bladder symptoms and the parents gave a history of sudden stoppage of the urinary stream, inability to micturate at times without getting down on all fours, intense pain in the bladder region and the occasional passage of blood in the urine. The physical examination showed a poorly nourished child, anæmic, and given to the use of tobacco. On the introduction of a stone searcher a calculus was at once felt. Suprapubic lithotomy was performed on October 18, 1906, and a stone weighing two and a half grams was removed. The highest temperature after operation was one hundred degrees on the second day. The prevesical drain was removed at the end of forty-eight hours and the skin sutures were taken out on the ninth day.

Convalescence was entirely uneventful and the patient was discharged October 30, 1906. At the present time, twenty-eight months after operation, there are no evidences whatever of vesical irritability.

Case 2.—B. W., male, age 13 years, was admitted May 16, 1908, and gave the following history: Frequent urination with occasional stoppage of stream, vesical pain and the passage of small fragments of gravel. Physical examination showed an undersized, ill-developed boy. An older brother had had a vesical calculus. Suprapubic lithotomy was performed May 18, 1908, and a stone weighing three grams was removed. Prevesical drain was removed on the third day, sutures on the tenth day. On the eleventh day after the operation patient developed a lobar pneumonia in which resolution took place slowly. Discharged June 14, 1908.

Case 3.—W. M. Y., white, male, age 36 years, was admitted January 28, 1909, with the following history: Two years previously he had had several attacks of renal colic, which were followed by the passage of gravel. For the last five months he has suffered from increasing frequency of micturition, voiding three and four times every hour throughout the day, vesical pain, more severe when the bladder is empty, and the passage of gravel and blood tinged urine. Physical examination showed a man of fair development, and examination of

the urine indicated a moderate degree of cystitis; the introduction of a searcher revealed the presence of a stone of fair size. A calculus weighing 31 grams was removed by suprapubic lithotomy January 29, 1909. The urine for the first forty-eight hours was bloody but rapidly cleared up. The pre-vesical drain was removed on the third day, catheter on the seventh day and the skin sutures on the tenth day. The patient was discharged February 13, 1909.

You may ask what should the postoperative treatment of these cases be? We know that an indolent life and an excess of nitrogenous food predisposes the patient to stone, hence we should advise exercise, fresh air, the drinking of large quantities of water and milk, and direct our energies toward keeping the urine bland. Meats, fats and sugars are to be avoided or partaken of sparingly. Uric acid diathesis should be combatted by the alkalies, such as liquor potassi citratis. Piperazin grs. v., t. i. d., has been much used. In phosphatic stones, mineral acids are indicated, combined with tonic treatment. If composed of oxalate of lime give the mineral acids with occasional doses of sodium phosphate. The bowels should be regulated by a laxative if necessary, but purgatives should not be given on account of the concentrating effect on the urine.

Complicated Fractures of the Skull.—

Schonwerth (Munch, Med. Wchschrft), reports 10 cases of complicated cranial fractures, three of which were associated with cerebral complications. All these fractures involved depressed fragments, necessitating the removal of the indented piece of bone. Nine patients made an uninterrupted recovery, and one died as the result of a purulent meningitis. In five cases the defect was covered from one to two weeks after the first interference with a movable periosteum bone flap, which healed in in four instances and was cast off in the fifth case. No disturbances on the part of the brain were noted as the result of the covering, nor did this seem to have a favorable effect upon existing cerebral symptoms, but, at all events, the brain was protected against damage through the plastic operation. In one instance paraffin had been injected for the covering of the cranial defect, and when an operation was performed later on for persistent epileptic seizures, the paraffin was found in fine flakes in the mass of scar tissue and under it, lying upon the brain as a solid lump the size of a cherry.

Pharyngitis Dyspeptica—Imhofer (Mitgl. des Verein. Karlsbader Aerzte) points

out a form of pharyngitis which occurs in disturbances of the digestive organs, and was observed by him in 21 instances. It is characterized by varicose vascular dilation at the posterior pharyngeal wall, swelling of the mucosa, sometimes a livid discoloration. The chief symptoms consisting in a burning sensation and the sensation of a foreign body, are increased after meals, in contradistinction to ordinary pharyngitis, in which the symptoms usually show a certain remission after eating. Varicose hypertrophy of the lingual tonsil belongs to the same group of cases. The treatment can only consist in the correction of the disturbance. Local measures are entirely unsuccessful, with anæsthesin, which may be given with a trial.

The Employment of Blue Electric Light in Various Affections.—

Mannjlow (Allgem. Wiener Med. Zeitung,) says that the effect of electric light is in many ways similar to that of sunlight. In the majority of his cases the author employed blue incandescent globes of 25, 32 and 50 candle-light power, comparing with these the effect of lamps made of ordinary glass. The illumination was applied for 15 to 40 minutes from a distance of about half a meter. The number of sessions was governed by the severity of the disease and the degree of the results. In the case of skin diseases, the light treatment was combined with the local application of a 5 per cent. eosin or fuchsin solution. Favorable results were obtained in various complaints of neurasthenic and hysterical patients not only, but also in a number of neuralgias, acute and chronic rheumatism, as well as tuberculous cositis. There was a diminution in the pains of gastric cancer. In inflammation of the liver, enlarged spleen and pleurisy, the subsidence of the pain was associated with improvement of the absorption. Among the skin affections, this treatment had a favorable effect on lupus, parasitic sycosis, psoriasis and eczema.

Contribution to Cerebral Surgery.—

Goldenberb (Berliner Klin. Wchschrft) says that among three patients operated upon for cerebral lesions and presented by the author before the Breslau Surgical Society was a girl five years of age who had a bony fistula of the occipital bone, in addition to tuberculous osteitis of the ulna. Cerebral symptoms had made their appearance a few months before the intervention which were attributed to a tuberculous meningitis, but these had again subsided. The cranial fistula continued to discharge pus, and was finally curetted by the writer, who found a badly diseased bone. Fragments

of the bone were removed, and underneath it a widely distributed caseous external pachymeningitis was demonstrated. The very friable duramater was scraped off, and the cerebellum was exposed, followed by the immediate escape of a rather considerable amount of tuberculosis pus, which came from an intra-cerebellar focus. The case terminated in recovery, Goldenberg mentions the absolutely latent behavior of this cerebellar abscess, as no cerebral symptom was present since a month prior to the intervention. The absence of cerebral compression, in his opinion, was due to the fact that the pus coming from the cerebellar abscess escaped by way of the fistula, in proportion to its formation, thus providing for drainage and preventing the elevation of the intracranial pressure!

Menstruation and Menorrhagia.—Wiley, in the *Edinburgh Medical Journal*, states that we may still regard the monthly cycle as a preparation of the uterus for the development of an impregnated ovum, but we must realize that the important physiologic requirement is an efficient blood supply to the uterine musculature. Three points are important: 1. Many capillary fissures are closed during the intermenstrual period and become filled with blood and act as part of the general system duration. 2. The uterus increases in size during menstruation. 3. Besides contractility, uterine muscle possesses great possibility of hypertrophy. The monthly cycle is a vasomotor change of uncertain origin, but dependent on ovarian integrity, whereby the uterine wall is richly supplied with blood in preparation for hypertrophy in presence of an impregnated ovum. When no pregnancy occurs the increased blood supply escapes by rupture of capillaries and diapedesis of corpuscle, with possibly some slight destruction of surface epithelium. If this view of menstruation is true the endometrium plays a passive and secondary part at the monthly cycle, and menorrhagia should direct attention to the blood supply of the muscular wall, rather than to the endometrium. Various observations in reference to causation of congestion of the uterus and inefficient action of uterine muscle which lend support to this view are discussed. From these considerations Wiley concludes that in menorrhagia without physical signs the aim should be (1) to relieve undue congestion—pessary or operation for misplacement, treatment of constipation and general conditions, etc.; (2) to eliminate sources of poison to the uterine muscle—lead or phosphorus poisoning, alcoholism, etc.; (3) to improve the general muscular tone of the patient by regular hours, simple

nutritious food, gradually increasing outdoor exercises of the arms and upper part of the body are often useful to relieve uterine congestion; (4) to assist the action of uterine muscle directly by suitable drugs, e. g., hydragric or the contarnin salts. Massage to the uterus, she considers harmful by directing attention to the pelvic organs. Curetting is indicated in many cases for diagnostic purposes.

Intestinal Haemorrhage After Appendectomy.

—Guibe, in the *La Presse Medicale* divides these cases into two classes—(1), Those where the hæmorrhage comes from the region of the appendix; these are due to a faulty technique in the method of removal of the appendix and the treatment of the stump. (2), Those cases where the hæmorrhage occurs at a distance from the appendix, most frequently from the duodenum. This latter form of bleeding is occasionally found in cases of appendicitis complicated with general peritonitis, and is usually accompanied by hæmatemesis, and is due to an ulcer of the stomach or duodenum. It occurs also in acute cases where there is no general peritonitis; here also it is frequently associated with hæmatemesis, and the cause is probably gastric or duodenal ulceration. The cases, however, where this intestinal hæmorrhage occurs after the operation performed during the interval are the most interesting. No fatal case of this kind has yet been reported, so there are no *post-mortem* finding to go on. There are two types of these cases—those in which the hæmorrhage occurs within the first twelve hours and those where hæmorrhage occurs later, from the third to the seventh day. In the first cases the hæmorrhage probably occurs at the time of the operation from the cut appendix or from some injury to the intestine. He considers that the latter types are due to the intestinal operation, and are probably the result of a thrombosis causing embolism of the vessels of the stomach or intestine, or to a retrograde venous embolism. The writer also points out that a similar condition is sometimes seen in other operations on the gastrointestinal tube.

The Wake County Board of Health met in regular session in Raleigh, N. C., May 4th. The board went into the election of a superintendent of Health for Wake county, and applications from Dr. J. J. L. McCullers, and Dr. W. G. Horton, of Raleigh, were read. A ballot was taken, and Dr. McCullers received six votes, and Dr. Horton, one. Dr. McCullers was declared elected to succeed Dr. James W. McGee, Jr.

Charlotte Medical Journal

Published Monthly.

EDWARD C. REGISTER, M. D., EDITOR
CHARLOTTE, N. C.

THE NORTH CAROLINA STATE MEDICAL SOCIETY.

The place is Asheville, N. C., the time is June 14 to 16. What is it? The annual convention of the doctors who compose the North Carolina State Medical Society. We are looking forward to a great meeting and even as these pages are perused by the reader the time of meeting has arrived. Asheville is a great town, pleasantly situated amid Carolina's far-famed mountains, easily accessible by reason of the excellent railway service, possessing hotel accommodations unsurpassed by any city in the country, claiming a body of medical men the personnel of which is the equal of any body of doctors in America, or the whole world, we might better say; there is therefore no possible chance that the meeting could be other than a good one. It is true that Asheville is rather far removed from those physicians who dwell amid the sands and pines of the East; but it will prove, even to these distant dwellers, a mighty boon to lay aside the cares and drudgery of medical practice and spend a few days in one of nature's wonderlands. A visit to Western North Carolina is worth the time even when there is no other good reason for going except mere pleasure. At this particular season the mountains are clothed in all the glories of springtime, and that should be yet another inducement. There are hundreds of doctors in North Carolina to whom the whole year brings no holiday, no relaxation, other than that which is found in an occasional attendance on the State Medical Society. It is not always necessary that a man should feel that he must have some new theme to present, something that no one ever before heard, some great and useful original work. Even some of the knowledge of the fathers of medicine is worth repeating and rehearing. It matters little whether each doctor can carry a mighty and important message each year to his fellows, that is not the idea we should have when we attend. There are few men who can always be expected to have something really valuable to say, but out of a great number of papers, discussions and addresses by a great many men one will always be sure to hear things that are worth coming to hear. After all then the medical society is not so much a forum in which individual

eloquence and knowledge may be displayed—although indeed this must go on at the same time, as it is a place where may learn something, be lifted out of ruts in which we have been content to travel lo! these many years, renew old time friendships and form new ones, see and know one's fellows, and forget for a time the cares and work at home. There never was a man yet who couldn't learn something from other men. It may not be medical lore that we carry back home with us—there are other things just as good, for no doctor can go to a medical society meeting and fail to assimilate ideas which will be a help to him.

Dr. J. F. Highsmith, of Fayetteville, a genial gentleman, a learned physician, a surgeon of wide reputation and genuine attainments, and president of the North Carolina State Medical Society, has left no stone unturned in his efforts to guarantee a large attendance and a full program. He will preside over the sessions of the Society with dignity and fairness.

To Dr. D. A. Stanton, of High Point, the efficient secretary, is due beforehand the praise of all for his untiring efforts toward arousing a proper spirit of zeal and enthusiasm. He has worked day and night—as we happen to know—and it is only just to prophesy in advance that the success of the meeting will in no small degree have been due to his labors. Elsewhere in this issue we publish the preliminary program, the completed program reaching us too late for publication. As can be seen from the names and titles enumerated there will be much that is interesting to see and hear.

The Asheville doctors are busily arranging for the entertainment of the Society—and these gentlemen never do things by halves. Dr. T. E. W. Brown is chairman of the local committee on arrangements. It has been whispered that one feature of the occasion will be an old time barbecue; those who remember a similar event during a previous meeting in Asheville will be strongly inclined not to miss this one.

The railroads and hotels are granting special rates to those who attend.

THE PROGNOSIS OF INTESTINAL OBSTRUCTION DURING PREGNANCY.

Intestinal occlusion is serious for both the maternal and fetal life and out of 50 recorded cases the patient has succumbed thirty-six times, while 27 infants were lost, thus making the maternal mortality 62 per cent. and for the children 46 per cent. The inference which was undertaken in 36 cases gives the following results: For the mother there were 18 deaths and 18 recoveries,

while for the child there were 16 deaths and 20 recoveries, thus making the maternal mortality 50 per cent and the infantile mortality 45 per cent. Of 24 cases where no operation was undertaken only 6 mothers were saved, while the child was saved in nine instances. Consequently we have here a maternal mortality of 78 per cent, that of the foetus being 60 per cent.

During pregnancy intestinal occlusion plays an unfortunate part as far as the mother is concerned, because out of 11 pregnancies where it occurred it resulted in 9 miscarriages and 6 premature deliveries. In the latter event, if the child is near term, it may survive, even if the mother is delivered during collapse. But for the mother the prognosis appears quite as bad in all periods of pregnancy, the latter two months of gestation being particularly sombre, because, at this time, it would appear that the frequency of occlusion is the greatest. Beside the instances of miscarriage and premature labor, there are a certain number of cases where induced labor has been attempted. Now, although this interference is relatively favorable for the child during the last month of gestation, the same cannot be said for the mother, as only two were saved out of six cases of induced labor. It has been noticed that generally following this interference an immediate improvement in the mother's condition took place, but this was of short duration and the process soon continued its fatal progress. On the other hand, operative interference does not seem to aggravate the prognosis in those instances where it has been resorted to early in the case. At the time of labor the prognosis is still worse, and out of three cases two mothers died, but all the children were saved. Labor does not appear to be influenced by the presence of an intestinal occlusion and follows the ordinary course. During the postpartum a cure was obtained six times out of 10 cases, and the four deaths were due to either non-interference or an incomplete late interference. It should be observed that this applies also during pregnancy and the reason that the results obtained have not been more favorable in those cases operated on is because the mother was already in a desperate at the time the interference took place.

THE ETIOLOGY OF REN MOBILIS.

Various are the opinions regarding movable kidney. Following Lindner's example, a certain number of writers believe that a congenital predisposition so-called, must be present for the development of movable kidney, while in opposition to this supposition, we would point out that as far as we

are aware a movable kidney has never been found postmortem in the newly born and that this affection is not frequently encountered before the age of twenty. If a so-called congenital predisposition played any part in the production of this affection, certainly one would meet with it at most any age.

The French and English schools are favorable to this theory, while in Germany it is generally admitted that movable kidney develops later in life.

Among the causes which may give rise to *ren mobilis* a decrease of the intra-abdominal pressure certainly plays an important part. By intra-abdominal pressure the various viscera are retained in their normal position, but it is, above all, the kidney, as has been emphasized by Senator, which is held against the lumbar region by the positive abdominal pressure and as the walls are very resistant, the kidney is fixed more securely than any other of the abdominal viscera. If, therefore, the intra-abdominal pressure decreases the weight of the kidney itself will pull on the structures holding the kidney in place and the latter cannot resist the traction on account of the decreased abdominal pressure. To this must be added, that, by a decrease of the intra-abdominal pressure, the more movable abdominal organs with which the kidney is more or less intimately connected by ligaments, more particularly the liver and the neighboring portion of the intestine, will, when the patient is in an erect position, drop downwards, thus, exercising a direct downward traction on the kidney. From this condition of affairs, the ligaments become elongated and the kidney becomes movable.

The decrease in intra-abdominal pressure is found with great frequency in the multiparous, whose abdominal walls have become distended and relaxed, on account of frequent gestations and do not regain their normal tonicity. The removal of large abdominal growths acts in the same way as pregnancy; likewise a rapid absorption of fat in the abdominal walls and within the abdominal cavity.

Other writers attribute the development of movable kidney to atrophy of the fatty capsule, such as occurs after severe illness followed by general emaciation. But one should be rather cautious when admitting this etiology, because it has been pointed out that, if the atrophy of the fatty capsule played an important etiological part in the development of movable kidney, this affection would be frequent among men as well as women. However, the comparatively few cases met with in the male would rather invalidate this theory.

Contrary to the theories which support the view that *ren mobilis* is due to changes arising in the body itself, other writers assume as etiological factors certain external mechanical forces. Kuester and Keller especially, have endeavored to explain the etiological of *ren mobilis* by acute and chronic traumatism, such as would cause a narrowing of the lower portion of the thorax and thereby force the kidney from its normal position. According to these authors traumatism is the direct cause in the etiology of *ren mobilis*, while other conditions already referred to are secondary and in themselves would never produce this condition.

Acute traumata, such as fall on the lumbar region, or violent stretching of the body, such as would occur in catching a heavy weight, causes stretching and even laceration of the renal capsule and peritoneum, while falling on one's feet or perineum may also have the same effect.

Now, if traumata were of importance in the etiology certainly men would be much more frequently the victims of *ren mobilis* than women, for the simple reason that they are more exposed to accidents. The reason for the lesser frequency in the male, according to Kuester, due to the fact that the traumata occurring in males more frequently result in laceration of the kidney. According to this writer, dislocation and laceration of the kidney are merely different degrees of the same lesion.

Among the chronic traumatism we would especially mention tight lacing. The wearing of a tight corset, and especially the traction produced by the weight of the skirts attached around the waist, are certainly factors in the production of *ren mobilis*. The present dress of women causes the lower part of the thorax to be extremely narrowed and from this it naturally results that the liver is pushed downward and pressure from above is directly brought to bear on the kidney, so that the latter is also pushed from its normal position. However, we are of the opinion that corsets should not be condemned in too sweeping a manner. Those that really do harm are the poorly constructed ones giving a waste line too high up in the region of the ninth and tenth ribs. If the lacing is applied at a lower point in the region of the twelfth rib, or still lower, so that the corset is supported by the iliac crest, we are of the opinion that, far from being the cause of *ren mobilis*, it might be a preventative.

The kidney may also be dislocated by the diaphragm when the action of this muscle is violent and severe, as for example, in cases of chronic catarrh where the patient is continually coughing. The same action

may occur in chronic constipation where the patient is obliged to strain for a long time at stool, but in our opinion, there is no one causative factor, and we are inclined to admit that all the above mentioned causes may produce this affection.

THE NEW YORK TUBERCULOSIS EXHIBIT

Tuberculosis is a preventable, communicable and curable affection, but so far no specific remedy for its cure has been found. Its prevention and cure are matters entirely of hygienic living, but in this respect it is quite similar to a number of physical derangements that prematurely kill the human race. If personal cleanliness, wholesome diet and sanitary housing were the rule instead of being the exception, the general health in communities, both large and small, would naturally be far better than it actually is. Hence the knowledge of hygiene which the New York Tuberculosis Exhibit is disseminating will undoubtedly reduce the rate of mortality not only from tuberculosis but likewise from most, if not all other communicable diseases.

The educational value of a sanitary exhibition such as this with its surprisingly large attendance, largely composed of recent immigrants, can hardly be overestimated. This exhibit admirably supplements the educational work which is being carried out by the Department of Health, as it reaches an element of the population upon which the circulars and hand-books of the department make but slight impression.

In his report for 1907, the New York Commissioner of Health explained the slow recent decline in the mortality rate by the presence of an immense number of foreigners who could not neither speak nor read the English language. Now it is particularly among the offspring of these people that the mortality is extremely high, and if sanitary instruction could be imparted as readily to the foreign element of the population as to the native born, the prolongation of life would probably soon be as favorable in New York and other large cities as it is in the rural districts.

The New York Health Department unquestionably ranks among the first, and in addition this city has made greater advances toward a solution of the tenement house problem than perhaps any other large city. Nevertheless, during the recent years of tremendous foreign immigration the mortality rate has remained practically stationary, in spite of a notable improvement in the hygienic condition of the houses of the houses of the poor of an equally marked extension of public sanitary supervision.

There is no evident reason why the death-

rate should be greater in cities than in the country, and in point of fact the cities of Austria and Bavaria have for years been more healthful than the rural districts of those countries. Consequently, if the mortality rate in New York has recently been yielding with disappointing slowness to radical improvements in public hygiene, and if it remains far in excess of that of the rural parts, the cause must evidently be sought in the personal habits of a large section of the population. Heretofore this section has been unresponsive but has now been stirred beyond all expectations by the message of hope and self-help conveyed to it through the Tuberculosis Exhibit.

THE INSIDIOUS INFLUENCES OF MODERN LIFE.

Since the question of prophylaxis has compelled attention in the medical world, one wonders, if thoughtful, how humanity has managed to survive the cruel strain so long thrust upon its recuperative powers, and how much it might gain by the intelligent application of simple regulations.

In the search for gustatory novelties we have disguised the true taste of foods with irritating condiments; we have fallen into evil habits of dietary incompatibilities resulting only too often in that form of autointoxication due to the absorption of products of incomplete assimilation.

Most of us have one or more, frequently all of the habits of recognized stimulation or sedation, i. e. of the indulgence in alcohol, coffee, tea or tobacco. Few deny their poisonous qualities.

It has been said, perhaps with exaggeration, that 90 per cent. of men have at some time had gonorrhea, and that many of these have had syphilis, a circumstance which presupposes a degree of the same condition in women, since venereal disease is generally contracted from one of the opposite sex.

One cannot escape the conclusion that while the autointoxications, insidious poisons and transmissible disease may be survived by the individual even without, perhaps, noticeable effect, still, if suffered for generations, must surely exert an influence, and worst of all, in such a manner that the cause is scarcely to be appreciated, since, excepting disease stigmata, we are unlikely to recognize other influences so insidious as to extend over such long periods.

Another factor of far-reaching importance is the artificial basis of our standards of natural selection to the disadvantage of the best physical and intellectual qualities. We place an enormous value upon the possession of material wealth or even the enjoyment of a type of figure harmonizing

with a prevailing fashion rather than with the greatest physiological efficiency.

Some enlightened persons are vaguely aware of this state, though still groping in the dark. Even the medical profession is by no means unanimous in its opinion as to the most effective methods of overcoming these evils, though all agree that in some way the solution will involve the intelligent instruction of the public. We may reach many by an appeal to their intelligence while others must be influenced by the knowledge that they cannot successfully compete in life without the best attainable physical and mental equipment. But whoever they may be, we shall attain our most brilliant results through the education of the coming generation rather than that of contemporary adults. As to this end we are solicitously looking to the public schools, public lectures and the generous influence which the profession has, if even to its material loss, so constantly exercised in behalf of preventive medicine.

THE ACCIDENTS FOLLOWING ABDOMINAL PARACENTESIS.

During the progress of bivenous cirrhosis, in general, and in Laennec's cirrhosis in particular, the physician is obliged to frequently resort to paracentesis. This simple operation, which must be repeated upon numerous occasions in certain cases, is not exempt from danger; complications are possible and may be of such serious character as to cause death. In the *Presse Medicale* of September 25, 1908, Perrin has published an excellent study on the complications which may arise from this surgical interference.

The most common accidents, perhaps, are those arising from a severe anemia. The patient becomes worn out by repeated puncture and cachexia rapidly develops. The integuments become dry and the patient then presents the characteristic aspect of the cirrhotic. Hepatic insufficiency may also occur, in which case death takes place in coma.

Icterus gravis may occur a few days after paracentesis, undergoing its evolution with great rapidity. The progressive cerebral torpor, the dry integuments, the subicteric tint of the conjunctiva and the appearance of cutaneous or gingival hemorrhages are the symptoms which make their appearance, finally ending in coma. Boidin and Lian have recorded cases in which the epigastric or subcutaneous abdominal artery have been injured by the instrument during puncture. The blood collects in the peritoneal cavity and only gives rise to symp-

toms of a marked and rapidly developing anæmia. The hemorrhage is rarely due to a lesion of the veins of the abdominal wall because, as they can be seen, are avoided. In order to avoid this rather exceptional accident one should make the puncture in the median line between the umbilicus and pubis.

Hemorrhages from the digestive tract have been known to occur after paracentesis. According to the case one can incriminate either an icterus gravis or simply a sudden decompression of the abdominal venous system. In order to avoid this complication, a very severe diet should be ordered while the ascitic fluid should be slowly withdrawn, after which a tightly applied abdominal binder is placed on the patient.

Perrin particularly insists on cardiac dilatation *a vacuo*, and he has observed several cases where the withdrawal of the ascitic fluid has brought about hypostolia with tachycardia, and a weakening in the cardiac contractions. At autopsy the heart is found soft and pale. The mechanism of this process is quite simple. The removal of the fluid from the abdominal cavity results in a lowering of the diaphragm, which causes an increase in size of the thoracic cavities with a consecutive cardiac dilatation.

It would appear to us that Perrin does not attribute a sufficiently important part to the pre-existing condition of the myocardium. A heart does not become dilated so easily and the proof is the rarity of this complication in cirrhotic subjects who have undergone paracentesis. It is probable that patients who present a cardiac dilatation so easily have a pre-existing lesion of the cardiac muscle, a lesion due to alcoholic or cirrhotic intoxication. This being the case, paracentesis would merely be a cause of secondary importance. Another proof is furnished by clinical observation. Collapsus, with a soft heart and tachycardia, is a common accident arising towards the end of cirrhosis with a marked hepatic insufficiency. These accidents appear when no puncture has been made and are merely due to cirrhotic intoxication. Cardiac tonics are usually without any effect, especially when resorted to late in the progress of the affection, and it is better to prescribe them before paracentesis is resorted to.

All these complications are fortunately rather the exception than the rule, and may be avoided by not resorting to paracentesis when the vitality of the patient is low and the tongue dry. The possibility of these complications should, however, always be recalled and the patient is family warned.

DISLOCATION OF THE SEMILUNAR CARTILAGES.

An important point to be noted if one consults recorded cases is that the overriding of the internal semilunar by the femur has so small a place given it. On the other hand lacerations of the internal semilunar, between its anterior attachment and its attachment to the internal lateral ligament have frequently been recorded. The reason for this is probably to be accounted for from the fact that any mechanical interference with extension of the knee causes greater disability and more pain than equal interference with flexion. To carry weight on a fully extended knee requires no muscular effort compared with that necessitated if the knee be flexed, and abnormal muscular exertion produces marked fatigue, if not actual pain. For this reason relief is sought for in surgical interference.

As the usual incisions selected do not disclose the posterior aspect of the cartilage, posterior injuries may be overlooked. Recent experiments on the cadaver have confirmed the conclusions previously arrived at relative to the results of rotation of the leg after section of the internal lateral ligament between its attachments to be internal semi-lunar and the femur. There is always increase in lateral motion and external rotation and the back portion of the cartilage may be caught between the femur and tibia. If, on the other hand, the ligament be cut between its attachments to the semi-lunar and the tibia, there is less increase in lateral motion and rotation, but with external rotation there is very marked tension on the fore part of the semilunar which draws the cartilage into the space between the femur and tibia.

If in the living, while this space is obliterated by the weight of the body the same sequence of events occurs, rupture of internal lateral ligament below the semilunar and forcible external rotation of the weight-bearing foot, it is extremely probable that the semi-lunar will give way at its weakest point which is its anterior attachment, or between this and its middle. The resulting limitation of motion and its complete cure by operation is so well known that no discussion is necessary. There is one point referred to by Tenney which should be recalled and that is the connection between ligamentous and semi-lunar injuries, for the reason that damage to the lateral ligaments is a very common injury and because proper diagnosis and treatment are essential not only for the comfort of the patient, but to prevent misfortune later when the violence may be less and the consequent disability

greater by reason of rupture or dislocation of the semilunar.

The diagnosis of injury to the ligaments is usually easy when the patient is seen soon after the accident, on account of the sharply localized tenderness over one or both bony attachments. In the more severe cases where complete avulsion has occurred and the joint is filled with blood, there is a noticeable increase in lateral motion and external rotation, both of which are painful for months afterwards.

The treatment of this condition must naturally vary with the severity of the injury. With the slightest degree of damage the essential thing is to remove strain from the ligament by retaining the knee in internal rotation and slight flexion. This may be done by a Schaeffer splint or by properly applied adhesive strips. If the injury to the ligament be recent and severe enough to increase the lateral and torsion movements to a marked degree, the proper treatment is to open the joint and repair the damage. There is blood in the joint-cavity which will favor adhesions, while the torn surfaces are separated by blood clot and ragged weak tissue. If repair is left to take the natural course the ultimate result is crippling of the limb.

HYPERTONIA VASORUM CEREBRI.

Hypertonia vasorum cerebri is the subject of a paper by Dutton in *American Medicine* for July, 1908. The subject is one that has called forth a great deal of attention to hypertonia because it has advanced entirely new theories, many of which have been verified. He deals most exclusively with pathological conditions ascribed to hypertension of the cerebral vessels: Etiology, pathology, symptoms, diagnosis, prognosis, and treatment, in such a way as to be readily comprehended by the casual reader.

The pathological conditions are traced with special reference to alterations of the arteries and capillaries. The symptoms are so well delineated that one is enabled to make a diagnosis with little difficulty. It is, at times, quite hard to distinguish hypertension of the cerebral vessels from other pathological phenomena. It differs from acute alcoholism, opium poisoning, uremia, and syncope. Cerebral embolism, apoplexy, thrombosis, aneurism and artery block or sequences of, or associated with hypertension of the cerebral vessels, and confront the medical profession with one of the most difficult problems known to the diagnostics of internal medicine.

Artery block is a source of error in diagnosis. Many thousand deaths occur yearly that are erroneously attributed to heart,

brain, or kidney diseases, but are in fact the result of artery block.

The block may be due to an active or passive hypertonic state of the cerebral vessels. Spasms of the cerebral vessels, which may be toxic, tonic or clonic, produce artery block and its possible sequences: aneurism, apoplexy, thrombosis, embolism, or capillary hemorrhage, any of which may cause death.

Dutton holds the hypothesis that epilepsy is the sequel of an anglo-neurotic arterio-stenosis, or disturbance of the circulation of the convolutions, producing in accordance with the intensity of the aberration is petit mal, or le grand mal. The foregoing hypothesis is not founded upon mere supposition but upon clinical evidence presented by 52 cases cured by regulation of the circulation.

The sphygmomanometer is a simple constructed instrument and should be in the armamentarium of every physician. It is of immense practical value. Tactile estimation should be made of every accessible artery. The ophthalmoscope must be ever kept in mind, for the eye frequently shows the first evidences of hypertension of the cerebral vessels.

When thousands yearly fall victims to heart disease, and apoplexy (with all it means), is it not well to look to the causes? There are physicians, today, who say that hypertension of the blood vessels is a compensatory condition. In the name of all that is reasonable, certainly a fair knowledge of physiology and anatomy should teach that there is a limit of endurance even to human machinery.

As has been mentioned before, hypertension of the blood vessels is a profound study; and hypertension of the cerebral vessels presents one of the deepest of subjects which, at present, occupies the scientific minds of medical Europe as well as in America.

THE EYE IN NON-OCULAR DISEASE.

While most of those graduated within recent years are fairly skilled in urine analysis, few can with equal facility examine the fundus of the eye.

Perhaps we are all a little afraid of the eye. We have for so long identified it with very specialized methods of technique that we gladly relegate all that pertains to it to one who concerns himself with no other interests.

This field is sadly neglected by the profession at large; there is no more legitimate reason why we should not all be able to do this than there would be for our inability to render a comprehensive urine analysis.

The fundus certainly betrays more patho-

logical conditions than the urine, its examination is more rapidly made, it requires not the facilities of a laboratory and the data with which we discover from an investigation of the urine. In point of fact, is not an albuminuric retinitis of greater prognostic importance than the findings in an albuminuric urine?

The information we obtain as to degenerative changes in the arteries with advancing age or as to embolism from cardiac disease or other source is in some respect more valuable than that which can be derived by any other means.

In optic neuritis of whatever degree we have an indication of conditions not necessarily ophthalmological which, but for the resources of retinoscopy, might remain utterly unknown:—in fact a choked disk is frequently the first sign hinting at the existence of an intracranial tumor.

Atrophy is recognized with equal facility after a little practice, and the importance of its early recognition—which is rarely possible with the specialist, since he generally sees the case late—cannot be overestimated.

Retinoscopic manifestations of lues, of tuberculosis, and of many other organic conditions have gradually made this subject so important as to warrant the assertion that this field will, before long, be as thoroughly studied in the medical schools and by the profession at large as are the subjects of clinical chemistry and microscopy.

When we consider how uncertain many, perhaps the majority, of our diagnostic resources are, how capable they are of misinterpretation and how many possibilities they may indicate, we certainly should not ignore an aid which supplies us, in whatever disease concerned, with the best index of physiological efficiency, or inefficiency, as the case may be.

The truth is that most of us overestimate the difficulty of mastering a subject of which we have been ignorant. It having for so long been a sealed book, we rest content to let it so remain, the more readily, as others appear to share our view, a policy fatal both to individualism and progress.

PRIMARY CARCINOMA OF THE URETHRA

Primary carcinoma of the urethra is an extremely rare affection, especially so in the male. At different intervals various observers have collected the literature bearing on the subject so that it may be said that carcinoma, while of extreme rarity, is probably the most thoroughly studied of all of the new growths of the urethra. The combined investigations of latter day ob-

servers, notably Basil Hall (*Ann. of Surgery*, March, 1904) and M. Hartman (*Tra-vaux de Chirurgie*, 1906) show but twenty-seven proven cases of carcinoma of the male urethra, and thirty-six in the female. To these cases we wish to add two observations, one by Dr. Frank J. Hall,—a squamous-cell cancer of the female urethra and the other by Dr. J. Block, and mark a carcinoma of the bulbous urethra.

The first case reported is that of Thiaudiere, in 1834. This case is rejected by both Kaufmann and Hall though in all probability the growth was carcinoma.

The first authentic case is that reported by Hutchinson (*Trans. Path. Soc., London*, Vol. XIII, page 167, in 1867). Since that time there have been a number of papers on the subject by Thiersch, Billroth, Poncet, Guyon and Guiard, Salzer and Grunfelds, Griffith, Czerny and Witzenhäusen, Carcey, Beck, Oberlander, Albarán, Hall, Hartmann, and others.

Practically all of the reported cases were squamous-cell carcinoma. Kocher's case (*Deutsche Chirurgie*, 1884) was partly a typical glandular carcinoma and partly a cylindroma. The case of Knoll (*Deutsche Zeitschrift für Chirurgie*, 1906) was an adenocarcinoma.

The site of predilection of carcinoma in the male urethra is in the bulbar portion. In the cases of Thiaudiere, Hutchinson, and Buday, the growth was located just posterior to the glands. In Billroth's case, the cancer began in the mid-pendulous portion, while in Grunfeld's case, the prostatic urethra was the point of origin. Hartmann is of the opinion that the tumor in Grunfeld's case originated in the prostate and that the urethra became involved secondarily.

In the majority of cases in the male, the growth was preceded and accompanied by gonorrheal stricture, though some cases presented no history of gonorrhea. Hartmann believes, however, that gonorrheal stricture occurs with sufficient frequency to be considered as a factor in the etiology.

Urethrorrhagia is considered by Beck to be a fairly common symptom though in quite a considerable proportion of the cases there was no hemorrhage from the urethra.

In the cases of Beck, Guyon and Guiard, and Grunfeld, hemorrhage from the meatus occurring independently of micturition, was one of the earliest symptoms.

Carcinoma of the urethra has been observed but three times through the urethroscope,—by Grunfeld, 1885, Oberlander 1893, and Beck in 1890. In Oberlander's case the diagnosis was made by means of urethroscopy and later confirmed.

The observations of these three observers

are of such interest as to justify description.

Grünfeld's Case: Urethroscopy with a stright tube. On inserting the tube to a depth of twelve centimeters, a small polypoid growth was encountered, implanted with a short pedicle. Four centimeters farther back, a second growth, flattened in shape was found. Ther color was whitish-yellow.

The urethral mucosa of the entire posterior urethra had an abnormal appearance. On inserting the tube to the verumontanum a narrow, horse-shoe shaped band of congested mucosa was encountered having its convexity at the right. The remainder of the utethroscopic field was filled by a tumor lying transversely. One-half of this growth was of a pale rose color; the other half was grayish.

The surface of the growth, which bulged into the lumen of the tube, exhibited a furrowed appearance with small red excavations. Dilated blood vessels were also noted. On withdrawal of the tube a thin sputum, running horizontally was noted. The mucosa above this septum was deeply lined and bled at the slightest touch. Below the mucosa was ulcerated. By manipulation the tumor could be raised, disclosing the ulcerated mucosa. On the inferior surface of the tumor, two faceted appearing spots were observed. The growth was carcinomatous.

Oberlander's Case: Urethroscopic tube number twenty-seven inserted to the extremity of the bulb. In the inferior half of the field was seen a semi-lunar pale cicatrix. The surrounding mucosa was grayish sclerotic looking. The entire extent of the mucosa almost to the region of the navicular fossa, presented a similar sclerotic appearance, with several cicatrices. At some points a plicated appearance of the mucosa was noted. There was a glau-dular urethritis.

Behind and above the semi-lunar cicatrix a growth was observed. By drawing the penis forward and pushing in the tube the growth could be made to present in the lumen of the tube. The growth was distinctly raspberry-like, being irregularly mammillated and presenting a bright red appearance.

The tumor was a squamous-cell carcinoma. In Beck's case the growth was found in the neighborhood of a stricture. The tumor was presented as a papillary prominence on the superior wall and towards the right side of the urethra. The growth was a freely bleeding one. It was a squamous-cell carcinoma.

The value of the urethroscope in the early diagnosis of urethral cancer can not be over-

estimated. A review of the literature relative to carcinoma of the urethra discloses the fact that in the vast majority of the cases the growth had advanced to the point of urinary extravasation and fistula before the diagnosis was made. It will be noted in the record of the twenty-one microscopically confirmed cases recorded by Basil Hall, that the case of Oberlander's is the only one in which the growth had not recurred within one year from the first operation. In Oberlander's case there was no recurrence twenty-one months after an operation which was fairly conservative,—a resection of the urethra. Beck's case was lost sight of. In Carcy's case, in which total emasculation was done, there was no recurrence in ten months, and in one of Montgomery's cases, there was no recurrence four months subsequent to an amputation of the penis. In all of the other cases, recurrence was noted within six months.

While from the standpoint of urethroscopy there is but meager data on which to base a diagnosis, it is safe to consider any easily-bleeding, fungating or raspberry-like growth in the urethra of a man who has attained the age of forty years to be under suspicion. A small piece removed via the urethroscope is sufficient for the purpose of an exact microscopic diagnosis, early operation is possible with a proportionately more favorable diagnosis.

THE DIAGNOSIS AND TREATMENT OF INTRA-ABDOMINAL ADHESIONS.

The objective proof that sometimes disturbances are produced by adhesions is only to be demonstrated with certainty in cases of the pelvic form. In the gastric and intestinal forms, as well as in many instances of the pelvic form, it is quite impossible to detect adhesions by palpation and one can only make a probable diagnosis, which will usually result in an exploratory laparotomy. The diagnosis is often made very difficult from the fact that the patient's history offers absolutely no point which would lead one to suppose that adhesions might be probable. The reason for this is because the symptoms to which they give rise only appear years after the primary pathologic process which gave rise to them has subsided, which, on account of the slight severity, is soon forgotten by the patient.

In making a differential diagnosis the most varied pathologic conditions of the abdomen have, to be considered, especially those which have pain as one of their principal symptoms. Symptoms produced by organic changes, such as carcinoma or ulcer of the stomach, biliary or renal lithiasis, appendicitis, etc., can generally be exclud-

ed by carefully going over the history of the case. This is, however, sometimes impossible, especially in cases of colic due to adhesions of the gall bladder and pain resulting from adhesions following appendicitis.

The differential diagnosis becomes more difficult when dealing with functional disturbances, such as nervous gastralgia, visceral and pelvic gastralgia, spastic constipation of neurasthenia, attacks of pain in hysteria, especially because a patient having adhesions not infrequently become neurasthenic as a result of the persistent troubles to which they give rise, and, therefore, it may be erroneously assumed that the case is probably one of nerves. It is more probable that pain generally considered as a symptom in surgery, at least is rather under-estimated than over-rated. In such cases, however, the history will probably show that the symptoms, if they are of a nervous nature, are secondary to some organic change.

When giving an opinion relative to the amount of injury sustained in an accident, the disturbances which may later arise from the formation of adhesions following an abdominal contusion should be seriously considered, particularly if there are any causes to suspect simulation.

By careful observation of all the symptoms, a fairly certain diagnosis can be reached in spite of the many difficulties present. When arising from the presence of adhesions they are never relied by medical treatment and are extremely obstinate, so that the typical characteristics of the pain and the form of the attacks will put one on the right road to a diagnosis.

A point of fixed pain always recurring at the same spot has a real significance, which too frequently is looked upon as neurotic and to which the indefinite term of neuralgia is given, when in reality the true lesions are mechanical and curable. In doubtful cases where the general condition shows evidences of being affected, an exploratory incision is certainly indicated, as the treatment of adhesions is purely surgical, at least in all the severer forms.

After the abdomen has been opened the adhesions should be searched for and broken down, and when present in the form of long bands, these should be, if possible, excised in order to prevent a recurrence. Since, in the majority of cases, a single band-like adhesion is the cause of the disturbance, a complete cure will be obtained and this has now been proven by a long series of reported cases from many observers.

In cases where the adhesions are extensive and numerous, it is often very difficult

to break them up completely, so that the operation frequently does not bring about the desired result because of recurrence. Therefore, it is preferable in cases where ileus from adhesions is brought about, to resort to gastro-enterostomy. It is only in the pelvic form that a cure may occasionally be brought about by massage, a treatment which is also quite serviceable in hastening the absorption of an old exudate.

THE DOCTOR VS. TYPHOID FEVER.

The recent discovery of typhoid carriers tends to complicate the question of prevention of the disease. The possibility of re-infection from the gall-bladder, or a latent focus in the affected individual; existence of persons as chronic carriers; or transmission by flies solicits closer attention. Even direct contagion has been again hinted at.

These new expositions of the disease complicate the duties of the private physician to the community and to the state. Individual infections must be avoided, and strict sanitary conditions maintained. The public health authorities should cooperate with the attending physician in private cases assuring proper precautions in the care of all discharges, including feces, urine, bath water, sputum, dishes, clothes, etc. The possible contagiousness of the disease should be carefully considered at all times. Chronic carriers should be isolated or under general supervision of physicians or health officer until such a time as his urine and feces are free from bacilli.

The problem of the water supply in relation to typhoid is the most difficult for the large municipalities to solve at the present time; although several have gone a great way towards its solution under the supervision of competent physicians and sanitarians:

The method of water supply and disposal of sewage in the city of Chicago is a marvelous piece of sanitary engineering. The sewage passes inland drawing water from lake Michigan to flush the drainage canal—once known as the Chicago river the filthiest stream in the world. In so doing, the city is enabled to obtain a pure water supply from its lake intakes. All this due to the zealous efforts of the medical profession of that city.

Cincinnati has reduced the mortality rate from typhoid one-half since the introduction of filtered water. Pittsburg, within the last few months, has been using a partly filtered water and has reduced the mortality greatly. Physicians throughout the United States are clamoring for better sanitary conditions, but they will have to educate the masses and coerce the classes to secure the much needed sanitation.

The time is fast approaching when something will have to be done in respect to all inland waters. This does not apply entirely to large rivers and lakes, but to creeks, springs, ponds, etc. The New England streams are polluted from factory refuse and sewage. The waters of the middle west are contaminated and poisoned by mill refuse, sewage, acids, and the millions of gallons of sulphur water from mines thrown annually into its streams. Two articles by Dutton and Breitenbach, *Jour., A. M. A.*, pp. 1496 and 1499, October 23, 1908, vividly portrays conditions as they exist.

This is a matter to be acted upon by the national law-makers, state and municipal boards of health, physicians and layman. In this beloved country which boasts of its great learning, progressiveness, vast wealth, and power; yet its masses go begging for fresh air and pure water!

INNUNITY.

It may be asserted with a fair degree of accuracy that the medical profession is delving far beyond the border-line of plausible sequences in bacteriology. In so doing, they ignore the facts brought to light by centuries of experimentation. The practitioner would not be wise, however, to allow recent disclosures in this branch of medicine to pass unnoticed. Recent discoveries have brought life and hope to thousands of human beings.

The sera of Behring, Flexner, and Koch have marked a most vital force in the progress of internal medicine; yet it would be entirely wrong to discard, or neglect, entirely, the old truths for the advent of the new.

The paramount idea in connection with bacteriological research is that of infection. The factors presented are, the disturbing element and the patient. Then allow for the receptibility, indifference, or resistance of the organism. The infection and the host must not, at any time, be lost sight of.

This consideration leads us to the element of individual study; not that of the experimenter in the laboratory upon the lower animals, but to the particular index of the patient. The work of Wright, Douglas, DaCosta, and others point out the indices in the different diseases which have certainly a distinct diagnostic value. But the physician must go further and study the textural proclivities and defensive powers possessed by his patients, in the different varieties of infection, so that the degree of this may be regulated by purely scientific methods.

Surely, it is argued, that this is not so vitally important, but examine the clinical reports, of the large hospitals. There is recorded the results of indiscretions. Vaccines

are used indiscriminately, disregarding rational therapeutics. It should be ever borne in mind that sera, with the exception of a very few, should be handled only by the expert and not by the general practitioner until such a time as he is entirely familiar with their usage.

As already stated, the main difficulty to be foreseen is the application of the methods in private practice. The younger graduates are being trained in this work in most schools of medicine, and their aid is eagerly sought in well equipped clinics, both surgical and medical. The older men may become proficient by post-graduate work, but hardly so by self-instruction.

The question is often asked why some individuals are immune against smallpox, typhoid, tuberculosis, and other infections. Surely this a matter pertaining to the individual organism and far beyond the power of the physician of today to add or detract from the knowledge that it is a fact not to be disputed. It is, however, dependant on the potentiality, metabolic and other, of the minutest elements of the entire organism.

To sum up what has been said, the physician should not lose the peculiarity of the patient to the side of bacteriological investigations. It is the duty of the physician, at all times, to be exact in his therapeutic efforts, and secure precision in his methods. It must not be forgotten that medical scientists are only on the threshold of investigations as regards many diseases and morbid phenomena that, at present, can only be treated empirically. The sufferers look to the physicians for relief, and, therefore, they must hold to the older lines of treatment until something new has been proven, beyond all reasonable doubt, efficacious. As medical nihilists and sceptics, the profession is not true to its calling. Thus it must turn to its predecessors and regard the individual organism and its vitality whether natural or acquired.

PREVENTIVE MEDICINE.

The old adage that "an ounce of preventive is worth a pound of cure" has been fairly well grounded into the minds of all progressive physicians; but to convince the laity that such is the case presents a momentous problem.

Although it has been over a century since Edward Jenner first made known to the world the value of vaccination; yet there has been formed in this enlightened world of ours anti-vaccination societies which bring distrust in the wake of their promotion. It may be, however, the contention is an aid to the progress of medicine in so far as it stays the hand of the over enthu-

siastic, and aids in the perfection of material and methods.

The protective and curative action of antitoxin in diphtheria has been known some sixteen years. It has reduced the mortality from diphtheria in the state of Pennsylvania from fifty per cent to 7 per cent. In other words the effect of the free distribution of antitoxin has been to save yearly the lives of from 1500 to 3000 children in Pennsylvania alone. In the face of these astounding facts there are thousands of the laity, and even some physicians who are incessant in their condemnation of antitoxin. It is reasonable to believe that if antitoxin were used in the early stages of all cases, and immunizing doses given to those exposed to infection that the disease would soon be thing of the past.

The serum of Dr. Simon Flexner has made that once common and much dreaded disease, cerebro-spinal meningitis, curable in a goodly percentage of cases. Likewise tetanus becomes a controllable disease.

Tuberculin appears to be a much abused agent. The recent International Congress on Tuberculosis had little to offer in its behalf other than has already been published in recent literature. It has its field of usefulness; but it will continue to be a problem within the scope of the scientific observer for some years to come.

The measures followed in the movement for the prevention of tuberculosis in the crowded centers of our large municipalities are deserved of high praise. The education of the masses into the gravity and the nature of the disease; the means of its prevention and cure, has met with marked success. The zealous prosecution of this fight against the white plague for twenty years will mark an epoch in the history of preventive medicine.

"The bubonic plague is on its onward march, not swift, but sure and inexorable," Such are the words used and the warning in an editorial in the August number of this journal. Should the plague start in Chicago instead of San Francisco, or other coast cities the mortality would be such as to make all other epidemics pale into insignificance. Health boards of the various states will do well to take all precautionary measures.

In brief reference to the status of health of the United States, and possessions, for the year 1908, it is noted that great epidemics of yellow fever are minus quantity, thanks to the efficiency of the Boards of Health of the Southern States, the Army and the Marine service, and others associated in the sanitary work.

BIER'S HYPEREMIA TREATMENT.

Of the more remedial measures applicable to the treatment of pathological conditions that have received earnest study and thought by the profession, the one known as Bier's Hyperemic Treatment has attracted much attention.

About sixteen years ago Prof. Augustus Bier instituted his form of passive hyperemia in the treatment of infectious inflammatory processes. But only within the past two years has it attracted any special attention in the United States.

Among the more notable papers published in America concerning this plan of treatment is that of Dr. Wiley Myers of New York. Other investigators have recently published records of cases in which the methods have been used. The more valuable reports however come to us through the German publications.

Some over enthusiastic friends of this form of treatment have made extensive claims for its use.

It has, of course, its limit and there are conditions where it would be really dangerous, and is then positively contraindicated. However in quite a number of conditions this form of hyperemic treatment is giving most satisfactory results, and it deserves the very earnest consideration at the hands of the medical profession of our country.

Bloodgood, in his article in "Progressive Medicine" for Dec. 1906, says: Bier bases his hyperemic treatment on the fact that the exudate in an inflammatory process is nature's means of combating local infection. Myers says in his article referred to above: "The idea of making use of an increased volume of blood in and around the diseased focus was conceived by Bier during his studies of the observation of the late Prof. v. Rokitsansky, who found that patients who had suffered from stasis in the pulmonary circulation due to heart disease or curvature of the spine never showed an active tuberculous lung affection on post mortem examination, while it had been often seen that patients suffering from disease of the heart, that produces a certain amount of anemia of the lung (stenosis of pulmonary artery) are especially subject to tuberculous disease of the lungs."

With these conclusions Bier worked to establish the fact first with hot baths, later with glass cups (suction methods), these proving unsatisfactory he adopted the rubber bandage, a thought stimulated by his observation of results in the use of such constriction in the surgical work of his chief of clinic at Kiel, Prof. Esmarch.

The bandage being gently wound around the limb or part just above the seat of the disease, cutting off the superficial circula-

tion, thus causing more blood to circulate through the part. The result of this form of treatment in quite a variety of affections give most excellent results and in a most pleasing manner.

A very important application is the following: In tuberculous joints and bones and in aiding the healing process after operations for these conditions.

Myers says: "Most remarkable are the results obtainable in the early stages of tuberculous joint affections. When supuration has occurred of course the pus must be evacuated.

The Bier form of treatment, undoubtedly, should be carefully studied and mastered by every physician in active practice. The early application of the principles and form of treatment in various applicable conditions in the very incipency of an attack by the family physician will thus save much suffering and injury by those affected.

This form of treatment, however, should be well mastered by those attempting its use, but the methods and applications are so plain that there is justifiable reason that every one could easily master the matter.

I. Journal of the A. M. A. Aug. 17, 1907.

CHATTANOOGA MEDICAE COLLEGE.

The Chattanooga Medical College which is the medical department of the University of Chattanooga, formerly U. S. Grant University, has just completed its twentieth year of highly successful work. On April 26, a class of twenty-four young doctors were graduated with most brilliant exercises. This school has made for itself a most enviable reputation for thoroughness of work, and its great usefulness has increased with every year. For entrance a good preliminary education is required; thus it keeps pace with the general movement for better qualified doctors the country over. It shows an earnest effort to give value received for time and attendance. The faculty is composed of eleven professors as follows:

J. R. Rathmell, M.D., Dean, Professor of Theory and Practice.

W. G. Bogart, M.D., Prof. Diseases of Women.

G. Manning Ellis, M. D., Prof. General Anatomy.

C. Holtzclaw, M. D., Prof. Surgery.

Frank Trester Smith, M. D., Prof. Med. Chemistry, Clinical Ophthalmology.

G. A. Baxter, M. D., Prof. Theory and Practice of Surgery.

N. C. Steele, M.D., Prof. Ophthalmology and Otology.

A. B. Woolner, M.D., Secretary, Prof. Pathology.

G. R. West, M.D., Prof. Obstetrics.

G. P. Haymore, M.D., Prof. Materia Medica and Therapeutics.

J. S. B. Woolford, M. D., Professor Physiology.

In addition there are fourteen instructors and lecturers making a total of twenty-five.

Editorial News Items.

The Fifty-Sixth Annual Meeting of the Medical Society of the State of North Carolina.

Asheville, June 15, 16, 17, 1909.

This preliminary programme has just been sent out by Secretary Staunton.

SPECIAL ANNOUNCEMENTS.

Asheville is a delightful city to visit any time in the year, but at this season it is specially fine. The committee of arrangements have promised us a superb time. Let's all go and see if they make good.

The Southern Railway has granted a reduced rate of one and a half fare, plus fifty cents returning.

Your ticket must be signed by the secretary before returning home.

The registration book will be at the door of the assembly hall. Don't forget to register and get a badge, and tickets to the various entertainments that the committee of arrangements have provided for us.

OFFICERS:

Dr. J. F. Highsmith, President, Fayetteville,

Dr. C. M. Poole, First Vice-President, Salisbury.

Dr. D. A. Garrison, Second Vice-President, Gastodia.

Dr. D. A. Dees, Third Vice-President, Bayboro.

Dr. D. A. Stanton, Secretary, High Point.

Dr. H. McKee Tucker, Treasurer, Raleigh.

The ladies, wives, daughters and sweethearts of the visiting physicians will be given a drive through the Vanderbilt estate.

TUESDAY MORNING, June 15, 10:30 A. M.

Society will be called to order by Dr. T. E. W. Brown, Chairman of Committee of Arrangements.

Invocation—By Rev. R. F. Campbell.

Address of Welcome—By Judge Thomas A. Jones.

Response to Address of Welcome—By Dr. C. A. Julian, Thomasville.

Annual Oration—Dr. Chas. W. Moseley, Greensboro.

Annual Essay—Dr. W. L. Dunn, Asheville.

PAPERS,

"Perinephritis and Perinephritic Abscess,"

- Dr. R. H. Moorefield, Westfield.
- "Typhoid Fever from the Experience of a Practitioner in the Mountains of N. C. and Va.," Dr. S. E. Pennington, Sturgills.
- "Dislocation of a Cervical Vertebra," Dr. E. T. Dickinson, Wilson.
- "Hemorrhage from the Lungs in Pulmonary Tuberculosis," Dr. Wm. R. Kirk, Hendersonville.
- "Some Clinical Features of Tumors of Female Breast, with Special Reference to End Results," Dr. Ellsworth Elliot, New York.
- "Surgery in the Year 1700," Dr. T. E. W. Brown, Asheville.
- "After Care of Surgical Cases," Dr. Henry Norris, Rutherfordton.
- "The Country Midwife," Dr. Bascom Croom, Maxton.
- "Tonsillitis, its Treatment and Importance of Same," Dr S. P. Burt, Louisburg.
- "An Analysis of Eighty Cases of Labor," Dr. K. P. B. Bonner, Morehead City.
- "Apoplexy," Dr. E. F. Strickland, Bethania.
- "Milk Poison, or Fall Poison," Dr. J. M. Hodges, Boone.
- "The Detection of Blindness in One or Both Eyes," Dr. H. H. Bridges, Asheville.
- "Anaphylaxis," Dr. Richard N. Duffy, New Bern.
- "Serumtherapy in Meningitis," Dr. F. P. Harris, Henderson.
- "Pathology of Hæmoglobinuric Fever," Dr. W. T. Parrott, Kinston.
- "Arterio-Sclerosis of the Uterus," Dr. Rob't B. Slocum, Wilmington.
- "The Influence of Pathology on Materia Medica and Therapeutics," Dr. Watson S. Rankin, Wake Forest.
- "The Origin of the Prescription and the Financial Side of Prescribing," Dr. Chas. S. Grayson, High Point.
- "Prophylaxis in Typhoid Fever," Dr. W. P. Horton, North Wilkesboro.
- "Empyema in Children, Personal Experience in Diagnosis and Treatment," Dr. J. R. Paddison, Oak Ridge.
- "The Economic Importance of Preventive Medicine," Dr. W. J. McAnally, High Point.
- "The Present Status in the Treatment of Nasal Disease," Dr. Dunbar Roy, Atlanta, Ga.
- "Bacteriuria," Dr. J. Meigs Flippin, Winston-Salem.
- "The Neglected Field of the Physician," Dr. M. Eugene Street, Glendon.
- "A Review of One Hundred Cases of Laparotomy," Dr. W. P. Whittington, Asheville.
- "Five Hundred Case of Headache," Dr. Gaillard S. Tement, Asheville.
- "The North Carolina Association for the Prevention of Tuberculosis," Dr. John Roy Williams, Greensboro.
- "Treatment of Puerperal Eclampsia," Dr. A. A. Kent, Lenoir.
- "Impotence," Dr. Baxter Haynes, Cliffside.
- "Fallacies, Past and Present, in the Treatment of Tuberculosis," Dr. William M. Jones, High Point.
- "The Treatment of Club Foot," Dr. William Mounce, Raleigh.
- "Healthful Children," Dr. Stevens Brown, Hendersonville.
- "The Play Impulse in Public Health," Dr. W. A. Lambeth, Charlottesville, Va.
- "Hematuria," Dr. A. J. Crowell, Charlotte.
- "A Plea for the State to Educate the Public in Infectious Disease," Dr. Wm. P. Holt, Duke.
- "The State's Duty in the Fight Against Infectious and Contagious Diseases," Dr. J. W. Halford, Chalybeate Springs.
- "The Principal Public Health Problem in North Carolina," Dr. Thos. A. Mann, Durham.
- "Cathartics," Dr. M. A. Royals, Yadkinville.
- "Personal Experience in the Diagnosis and Treatment of a Number of Cases of Gastric Neuroses," Dr. J. Allison Hodges, Richmond, Va.
- "The Liver," Dr. J. W. Wallace, Concord.
- "Symposium on Life Insurance Examination," Dr. Albert Anderson and others.
- "Frigidity from a Sociological and Gynecological View Point," Dr. C. M. Strong, Charlotte.
- "The Surgical Treatment of Epilepsy," Dr. Rigdon O. Dees, Greensboro.
- "Surgical Diseases of the Kidney," Dr. J. Garland Sherrill, Louisville, Ky.
- "Adenoids," Dr. J. G. Murphy, Wilmington.
- "Selling Diplomas to Medical Men," Dr. H. D. Stewart, Monroe.
- "The Legal vs. the Medical Medical Profession," Dr. J. M. Templeton, Cary.
- "The Management of Obstetrical Cases Complicated by Contracted Pelves," Dr. L. M. Allen, Baltimore, Md.
- "Puerperal Eclampsia," Dr. A. A. Kent, Lenoir.
- "The Urinometer in Obstetrical Practice," Dr. J. S. Gibson, Gibson.
- Subject to be Announced, Dr. H. McKee Tucker, Raleigh.
- Subject to be Announced, Dr. John Knox, Lumberton.
- "An Antiseptic Leech," Dr. W. D. Withersbee, Charlotte.
- "Report of a Case of Double Compound Fracture of the Leg," Dr. Jas. A. Turner, High Point.

"A Review of the Physiology of the Heart's Action," Drs. Wm. S. Jordan and J. M. Lilly, Fayetteville.

"A Review of Some of the Recent Researches in the Physiology of the Alimentary Canal," Dr. R. H. Lafferty, Charlotte.

"Gastric Functions-Hormones," Dr. C. N. Peeler, Charlotte.

"Clinical Notes on Sanitarium Work," Dr. J. C. Walton, Richmond, Va.

"Ephraim McDowell," Dr. Joseph Graham, Durham.

"A New Era in Scientific Therapeutics," Dr. H. Bascom Weaver, Asheville.

"Concerning Monsters," Dr. R. H. Whitehead, Charlottesville, Va.

"Pregnancy Complicated by Malformations of the Uterus and Vagina," Dr. Jas. N. Taylor, Bynum.

"Dead Fœtus, Seven months with Complete Placenta Previa," Dr. J. W. McGehee, Reidsville.

"Some Recent Views Concerning the Nature of Typhoid Fever," Dr. L. B. Newell, Charlotte.

"The Present Status of our Knowledge of the Thyroid Bodies," Dr. I. H. Manning, Chapel Hill.

"Traumatic Neurosis," Dr. Samuel Lloyd, New York.

Subject to be announced, Dr. F. B. Quinlin, Wilmington.

"Fracture of the Skull," Dr. I. F. Hicks, Dunn.

Subject to be announced, Dr. D. M. Prince, Louisburg.

"Shock," Dr. J. Vance McGougan, Fayetteville.

"Practical Suggestions on the Treatment of Hook Worm Disease," Dr. C. W. Stiles, P. H. and M. H. Service, Washington, D. C.

"Relation of the Life Insurance Company to the Agent," Dr. Albert Anderson, Raleigh.

"Medical Examination vs. the Commercial Report," Dr. J. T. J. Battle, Greensboro.

"Life Insurance and Mortality," Dr. J. M. Parrott, Kinston.

The following invitation has been received at this office:

You are cordially invited to attend the

Fifty-Sixth Annual Session of the

Medical Society of the State of North Carolina, Asheville, N. C., June fifteenth to seventeenth nineteen hundred and nine.

Buncombe County Medical Society.

There is no doubt that the approaching meeting of the North Carolina Medical As-

sociation will be a great success in every respect. Asheville is an ideal place for a meeting of this kind, and there is every indication that the meeting will be largely attended. The Doctors of Asheville have a national reputation for their ability, and willingness to entertain medical organizations.

Dr. E. C. Laird, formerly of Chase City, Va., has located in Greensboro, N. C.

Dr. W. R. McCain, who during the past twelve years has practiced medicine with great success at Waxhaw, N. C., has recently moved to Charlotte, N. C. In his new field Dr. McCain will devote his entire time to diseases of children.

Dr. W. S. Thayer, associate professor of medicine in Johns Hopkins university, Baltimore, and successor to Dr. Osler, has decided to study pellagra, which has now been recognized in nearly every Southern State. He is at this time spending some time in those places where it is most prevalent.

Surgeon General Wyman of the United States public health and marine hospital service has detailed Surgeon C. H. Lavin-der to make Columbia his headquarters for the study of the disease throughout South Carolina,

Dr. C. H. Wardell Stiles, the recognized expert on the hook worm disease, has also been detailed by Dr. Wyman, to investigate conditions among certain classes of South Carolina population,

It is understood an effort is being made to secure an appropriation of about \$50,000 from congress to warrant a thorough study of the hook worm disease.

Drs. M. L. Currie and T. C. Thompson of Vidalia, Ga., recently opened an up-to-date hospital at that place. It is known as the Minnie Lou Sanitarium.

A National Tuberculosis Sanatorium at Asheville.

A bill has been introduced into Congress by Mr. John G. Grant, representative from the Tenth North Carolina District, providing for the establishment of a national sanatorium for the treatment of tuberculosis in the vicinity of Asheville, N. C.

The Southwestern Kentucky Medical Association.

This association held its annual meeting in Paducah on May 12th, and elected the following officers; President, Dr. W. L. Mosby, of Bardwell; first vice-president, Dr. J. S. Davis, of Lovelaceville; second

vice-president, Dr. W. W. Richmond, of Clinton; secretary, Dr. C. E. Purcell, of Paducah; treasurer, Dr. C. H. Brothers, of Paducah; historian, Dr. R. T. Hocker, of Arlington. The semi-annual meeting of the society will be held in Benton in October.

County Medical Society.

At a meeting of the Augusta County (Va.) Medical Society, May 5th. at Staunton, Va., several interesting papers were read and discussed. After the above meeting the members of the Tenth Congressional District Society met and elected Dr. S. H. Burton, of Parnassas, councilor for the district.

Dr. J. K. Stockard, a native of Alamance County, N. C., who left there about ten years ago to enter the service of the United States army as surgeon, has secured a discharge, and has located in Reidsville, N. C., for the practice of his profession.

The State Board of Medical Examiners of Georgia, held an examination of applicants for license to practice medicine in Georgia, most of whom were graduates of the Atlanta School of Medicine, and the Atlanta College of physicians and Surgeons. The members of the State board, and all of whom were present, are Dr. F. M. Ridley, LaGrange, president; Dr. I. H. Goss, of Athens, vice-president; Dr. E. R. Anthony, of Griffin, secretary and treasurer; Dr. S. Gaulden, of Quitman, and Dr. J. L. Walker of Waycross. Render Anthony, of Griffin, acts as clerk of the board.

Dr. John Vansant, of Piedmont, Ala., received verdict for \$750, against the Louisville & Nashville Railroad for damages sustained as a result of his horse becoming frightened at a hand car of the defendant company, and running away with him.

At the regular monthly meeting of Abbeville County Medical Society, held in Abbeville, S. C., on May 7th, Dr. G. A. Neuffer presented a case of pellagra, which was examined, and discussed with great interest by the Doctors present. Dr. E. W. Carpenter, of Greenville, S. C., was present at this meeting, and made a very interesting, and helpful talk on obscure throat and bronchial troubles.

The friends of Dr. Rupert Blue, formerly of Marion, S. C., but now of the marine hospital service, will feel gratified to learn that on account of his efficient services in stamping out the bubonic plague in San Francisco, Cal., he has been promoted to

the rank of Colonel, with marked increase of salary.

The chamber of commerce of San Francisco has also presented Dr. Blue with a \$700 watch, in appreciation of his work for that city.

Dr. and Mrs. C. S. Jordan, and Mrs. Dr. C. V. Reynolds, of Asheville, N. C., were on their way from Asheville to Greenville, S. C., on May 18th, in an automobile. The car plunged over an embankment of more than forty feet, throwing its occupants high in the air, and to the ground several yards away. Dr. Jordan's left shoulder was dislocated. The other two occupants of the automobile escaped without the slightest injury.

The Chattanooga and Hamilton County Medical Society held an interesting and instructive meeting in the chamber of commerce, Chattanooga, Tenn., on the evening of May 7th. Dr. W. M. Bogart was essayist for the evening. He read an interesting paper, which was discussed by the other physicians present.

State Board Sensation.

A scandal of no mean proportions developed at the recent meeting of the Mississippi State Board of Health, which board is *ex-officio* the Board of Medical Examiners. After the examinations had begun, with 243 applicants on hand, it became positively known that the examination questions had leaked out, and that sets of questions were actually being sold at \$10 per. The Board immediately declared the examinations off and put up an entire new set of questions. Investigation resulted in the resignation of one member of the Board, although so far no thorough investigation has been made, at least if it has been made there has been no public report.

International Medical Ethics.

Boas of Berlin has made a suggestion which to us seems wise and practicable, viz: That at the oncoming International Medical Congress at Buda Pest this subject be brought up for discussion. After the question had been thoroughly discussed it would then be proper to appoint a committee to consider the subject further and draw up a code and submit it to the leading societies of the various countries who could either accept, amend or refuse. The committee could be continued until a code could be produced acceptable to all countries, and after such a code had been obtained it would be held to regulate the relation of foreign medical practitioners to one another. The moment is opportune for this work.

Prof. Boas' first and second contribution on this subject are published in *Berliner Aere-zekorrespondenz*, 1907, No. 37, and *Berliner Klinische Wochenschrift*, 1908, No. 52.

Board of Examiners of Trained Nurses of North Carolina.

President, Miss Constance Pfohl, R.N., Winston; Miss Edith Eaton, R.N., Wilmington; Dr. G. W. Blount, Washington; Dr. J. E. Ashcraft, Monroe; Secretary-Treasurer, Miss M. L. Wyche, R.N., Watts Hospital, Durham.

North Carolina State Nurses' Association.

President, Miss Constance C. Pfohl, Winston-Salem; 1st Vice-President, Miss Maria P. Allen, Morganton; 2nd Vice-President, Miss Ann Turgenson, Statesville; Treasurer, Miss Lillie Cowan, Durham. Directors: Miss Ella McNichols, Charlotte, and Miss Mary L. Wyche, Watts Hospital, Durham; Secretary, Miss Mary Sheetz, 412 So. Main St., Winston-Salem.

Dr. Williams Resigns.

Dr. Robert F. Williams, superintendent of the Virginia Sanatorium for Tuberculosis, has resigned because of his inability to carry on the work with the small amount of money available. The appropriation for this purpose is small compared to the great need, but any amount is better than none. It is a great work for any State to take up, and although it is to be regretted that Dr. Williams, whose work has been eminently satisfactory to the Board of Health of Virginia, could not see his way to continuing his efforts toward getting the institution under way, there is no doubt but that Virginia will continue her preparations for caring for those unfortunate people who are afflicted with the dread disease, tuberculosis.

A Prominent and wealthy citizen of Atlanta whose name is withheld has promised the Presbyterian Hospital of that city a gift of \$100,000 on condition that a like amount be raised by the hospital directors.

Dr. John T. Longina, of Jonestown, Miss., has been appointed health officer for Coahoma county, to succeed Dr. L. D. Harrison of Clarksdale.

Arrest and bail proceedings were recently instituted by an Asheville lady against two chiropractic practitioners, C. F. and W. F. Compton, both of the above named city, for alleged malpractice. After these men had treated her it was found by two reputa-

ble regular physicians who were called to attend her that the arm of the patient had been broken. We await the outcome with intense interest.

Confederation of Medical Licensing Boards.

The American Confederation of Licensing, Reciprocatng and Examining Boards met in Louisville, Ky., May 12, 1909. This Association in which twenty States are represented by their respective Medical Examining Boards, has for its object the following: To arrive at definite conclusions as to the educational qualifications that should be required of students to admit them to a medical college; the number of years that the student should attend, and the curriculum for each year of the college course; also what equipment a medical college must possess and the character of teaching that will justify the board in recognizing the school as reputable, so that the graduates may apply for examination and registration in any or all the States.

Another object of this association is to secure the adoption of uniform regulations in all the States, so that a graduate from any school may apply for registration in any State under the same requirements.

We see in this a decided step toward the establishment of national reciprocity, an end much to be desired. Some time in the not distant future we believe that it shall be that license in one State will guarantee the right to practice in all. Even without this well defined aim the above named association will accomplish the unification of State Board requirements so that there will no longer be such great differences in standards as now exists.

New Orleans Women's Hospital.

The work of the New Orleans Hospital and Dispensary for Women and Children has grown to large proportions, as was shown by the report for the month of April of this year. During the month 302 new patients were admitted and 1183 old cases were treated, a total of 1485 cases cared for at the institution. Complete figures for the year are being compiled and will be announced soon.

The officers of the institution are as follows: Dr. Edith Loeber, president; Dr. Clara T. Glenk, vice-president; Mrs. W. H. Dickson, recording secretary; Dr. Sara T. Mayo, treasurer; Miss K. M. Gordon, corresponding secretary; Mrs. Henry Baldwin, auditor.

Society Meeting.

The Louisiana State Medical Society held its thirtieth annual meeting in New Orleans

May 4th, 5th, and 6th, with Dr. E. Denegre Martin, President of the Society, in the chair. The sessions were held in the magnificent buildings of the Tulane Medical School, and a large attendance and a splendidly arranged programme of excellent papers, addresses and discussions made the meeting one of the best in the whole history of the Society. Over three hundred were registered at the opening session.

The officers of the Society for the past year were: President, E. Denegre Martin, New Orleans; vice-presidents, J. G. Hargrove, of Natchitoches, C. J. Gremillion, of Alexandria, John Callan, of New Orleans; secretary, E. M. Hummel, of New Orleans; treasurer, C. C. Bass, of New Orleans; chairman of committee on arrangements, W. W. Butterworth, New Orleans.

Councillors: Chairman of the council, E. J. Graner, Second Congressional District, New Orleans; secretary of the council, J. L. Scales, Fourth Congressional District, Alden Bridge; P. E. Archinard, First Congressional District, New Orleans; A. C. Eustis, Third Congressional District, Abbeville; E. D. Newell, Fifth Congressional District, St. Joseph; C. M. Sitman, Sixth Congressional District, Greensburg; R. O. Simmons, Seventh Congressional District, Alexandria.

A noteworthy feature was the use of the big blackboard in the assembly hall, upon which the secretary wrote the name of each speaker as he arose. These arrangements and others added greatly to the comfort and convenience of the members.

A proposal to divide the sessions into sections was voted down. The address of the President, Dr. Martin, is a noteworthy contribution. His subject was "The Doctors and Their Ethics," but his theme dealt more practically with the attitude of laymen toward the doctor and his ethics. He drew attention particularly to the notorious fact that legislators seem always ready to oppose any measure proposed by the medical profession, while they seldom fail to favor anything which the regular profession discontenances. His analysis of this attitude was a scathing arraignment of the blindness and misconceptions on the part of the public. The annual address delivered by Dean Walter Miller of Tulane University, on the subject, "Classics and Modern Training," was also heard with close attention. He showed how essential it is for the physician, engineer, lawyer and scientist to have a thorough knowledge of the classics, seeing that in all their branches so many, in fact such a multitude of, Greek and Latin terms are used, and he deplored the fact that we have for such a long time

neglected the classics in favor of the practical.

The papers presented were far too numerous for us to attempt to mention all of them. All were excellent. Among those deserving special mention were:

"Prophylactic Injections of Serum and the Theory of Anaphylaxis," by Dr. J. I. Lemann, of New Orleans; "Acute Spasmodic Asthma as an Evidence of Auto-Intoxication," by Dr. Allen Eustis, of Abbeville, La.; "Indications for Digitalis in Pneumonia," by Dr. A. A. Herald, of Shreveport. Dr. Halsey led the discussion here and referred to the various preparations of digitalis.

"Goitre" was the subject of the paper of Dr. George Dock, of New Orleans. Other papers:

"The Danger of Indications," by Dr. E. M. Dupaquier, of New Orleans; "Blue Sweat," by Dr. J. A. Storck; "Graves' Disease," by Dr. J. B. Elliott of New Orleans; "Experiences in Staining Bacteria in Fresh Blood," by Drs. Randolph Lyons and Burnham of New Orleans, "Therapeutics of High Frequency Currents," by Dr. Adolph Henriques.

Very interesting as well as valuable were the practical demonstrations which were given in the various laboratories of the medical school by the following professors: Drs. Haisley and Mann, digitalis, adrenalin, nitrites, aconite, caffeine, atropine, strychnine; Dr. Jones, results of State boards of health examinations; Dr. Bass, Wassermann's reaction; Dr. Eskelman, demonstrations of blood; Dr. Butterworth, assisted by Drs. DeBuys and Robichaux, parasite and ova; Dr. Simon, demonstrations of gastric methods and material; Dr. Guthrie, roentgenograms; Dr. Lemann, blood pressure apparatus; Dr. Dock, pulse-tracing machines; Dr. Weis, living spirochaeta pallida; Dr. Elliott, physical diagnosis: urine; Dr. Bel, tuberculosis: anatomic specimens, fresh air apparatus, etc.

A number of highly valuable papers were read on laryngology, otology and rhinology. Dr. George W. Robinson, of Shreveport, read a paper on the "Symptomology of Empyema of the Frontal Sinus," and Dr. Homer Dupuy, of New Orleans, read a paper "On the Relationship of Frontal Sinus Affections and Diseases of the Eye." Dr. Gordon King, of New Orleans, read a paper on the "Causes of the Empyema of the Frontal Sinus."

Papers on ophthalmology and diseases of the eye were also read by Dr. M. Feingold, of New Orleans, on "Prevalence;" Dr. R. W. Salter, of New Orleans, "Pathology;" Dr. E. A. Robin, of New Orleans, "Treatment;" Dr. Henry Dickson Bruns, of

New Orleans, "Prophylaxis;" Dr. M. Feingold, "Pregnancy, Lactation and Retinitis;" Dr. E. A. Robin, "The Occurrence of Several Cases of Juvenile Cataract in the Same Family." These papers were followed by one on "Bacteriology of the Eye," by Dr. C. A. Babin, of New Orleans, and a paper entitled the "Treatment of Trachoma," by Dr. R. W. Salter, of New Orleans.

Under the section on pathology and physiology, Dr. Gustave Mann and Dr. H. George F. Spurrell, both of New Orleans, presented papers. Dr. Mann's article was entitled "The Cancer Problem From the Micro-Physiological Standpoint," and he explained in his paper that he has been experimenting on cancerous growths in vegetables, and believes that he is on the verge of discovering a means of stopping the growth of a cancer, and hopes to be able to apply this method to stop the growth of cancer in an animal.

Dr. Spurrell's article was entitled "Injected Capillary Blood Vessels in the Monkey, etc.," and he accompanied it with about twenty slides showing how this was done. Dr. Carroll W. Allen, of New Orleans, also showed a series of pictures of various operations performed on the faces of patients who had been disfigured by accidents and who had been submitted to skin transplantation.

Dr. F. W. Parham and Dr. L. L. Caznevette, of New Orleans, read papers on knee surgery and the treatment of skin diseases with the aid of electricity.

The closing event of the convention of meeting was a brilliant banquet tendered the delegates by the Orleans Parish Medical Society. The banquet took place in the main dining room of the new Hotel Denechaud.

Dr. C. Jeff Miller was the toastmaster of the evening, and those who responded to toasts were: W. H. Seeman, "Our Guests;" G. H. Moody, "Our Guests;" E. D. Martin, "The Quick or the Dead," on the incoming administration; Charles McVea, "Before and After," on the outgoing administration; Dr. E. B. Craighead, "The University in Medical Education;" Clem Hersey, "The Press;" J. A. Danna, "The Charity Hospital and Medical Education;" H. D. Bruns, "The Country Doctor;" T. Ragan, "The City Doctor;" and L. Lazaro, "The Doctor's Wife."

At a meeting of the House of Delegates Dr. C. McVea, of Baton Rouge, was elected President of the Society; Dr. J. J. Archibard, of New Orleans, first vice-president; Dr. P. R. M. Littell, of Opelousas, second vice-president; and Dr. S. M. D. Clark, of New Orleans, third vice-president. Dr. J. C. Willis, of Shreveport, was elected councillor for the Fourth Congressional District;

Dr. Thomas Reagan, councillor of the Fifth; Dr. Simms, of Donaldsonville, councillor of the Sixth, and Dr. R. Simmons, of Alexandria, was re-elected as councillor for the Seventh District.

The next convention of the Association will begin on the first Tuesday of May, 1910. Dr. F. R. Tolson, of Lafayette, and Dr. E. D. Martin, of New Orleans, were elected as delegates to the American Medical Association.

Commencement Medical College of Virginia.

On May 19 the Medical College of Virginia closed another very successful year with brilliant and appropriate exercises which were held in the Academy of Music in Richmond. A large class of young men were graduated. Diplomas were presented to the following young Doctors of Medicine:

F. L. Banks, Madison Run; I. B. Berman, Norfolk; J. R. Boldridge, Winston, N. C.; T. G. Bradshaw, Franklin; S. E. Bray, West Point; V. O. Caruthers, Alden; M. F. Clarke, Shryock, W. Va.; D. L. Coffindaffer, Jane Lew, W. Va.; W. L. Cisby, Jefferson; I. W. Cunningham, Benham; E. W. Dodd, Buena Vista; J. C. Dunford, Portsmouth; W. L. Gatewood, Richmond; W. F. Grigg, Jarratts; O. W. Hacker, Roanoke; L. Hammer, Luray; J. M. Hutcheson, Rockbridge Baths; W. E. Jennings, Penicks; C. T. Jones, Champe; L. Karp, Portsmouth; B. Lee, Bristerburg; E. F. Long, Tobaccoville, N. C.; W. C. McDannald, Hot Springs; H. S. Ogilvie, Norfolk; E. W. Rawis, Carrsville; C. F. Shafer, Grafton, W. Va.; J. R. Simpson, Newbern, N. C.; J. M. Smith, Pocalontas; F. E. Steere, Richmond; J. C. Summer, Huffville; R. A. Vaughan, Vaughan, N. C.; W. E. Vest, Simpson; B. C. Willis, Jr., Theological Seminary; J. D. Willis, Willis; J. E. Womack, Angola.

University College of Medicine Closes Another Successful Year.

At the annual commencement exercises of the University College of Medicine held in Richmond, May 18, the following men received the degree of Doctor of Medicine:

J. C. Anderson, Jr., Tomsburg, W. Va.; V. L. Andrews, Mt. Gilead, N. C.; G. H. Baerecke, DeLand, Fla.; H. H. Bowles, Millwood; C. W. Byrd, Metomkin; M. B. Caballero, Adjuntas, Porto Rico; H. L. Collier, Hampton; J. K. Cowherd, Cumberland, Md.; M. W. Crawford, Lee Hall; T. B. Daugherty, Richmond; J. L. Davis, Sedley; G. T. Drivers, Rocky Mount; D. R. Dixon, Rocky Mount, N. C.; R. C. Fravel, Woodstock; J. Gerdine, Athens, Ga.; A. B. Gravatt, Calno; A. B. Grubb,

Grant; C. L. Harrell, Norfolk; H. P. Harris, Wake Forest, N. C.; J. L. Harvey, Pizarro; M. T. Hickman, Hudson, N. C.; B. E. Hughes, Chatham Hill; J. W. Jacksod, Bridgetown; C. E. Martin, Conway, N. C.; N. D. Morton, Jr., Bullock, N. C.; E. M. Newsom, Richmond; P. D. Parks, Parksley; G. C. Plummer, Grant; J. C. Ray, Bangor, N. C.; G. H. Eeese, Wirts; E. D. Rollins, Snowflake; C. R. Russell, Granite Falls, N. C.; F. G. Sigmon, Spencer, N. C.; S. A. Slater, Enfield; J. W. T. Smith, Mascot; T. J. Tudor, Critz; O. E. Underwood, Ernest, N. C.; W. R. Warriner, Crewe; W. R. Weisiger, Ashland; W. J. Whalen, Pater-son, N. J.; S. H. Yokeley, Thomasville, N. C.

Of these a number have received hospital appointments as follows:

Virginia Hospital—H. H. Bowles, Millwood, Va.; C. L. Harrell, Norfolk, Va.; T. J. Tudor, Critz, Va.

St. Luke's Hospital—R. C. Travel, Woodstock, Va.; W. R. Weisiger, Ashland, Va. City Home Hospital—J. L. Davis, Sedley, Va.; A. B. Gravatt, Calno, Va.

Retreat for the Sick—J. L. Harvey, Pizarro, Va.

Sarah Leigh Hospital, Norfolk—John Gerdine, Athens, Ga.

Sheltering Arms Hospital, Hansford, W. Va.—S. H. Yokeley, Thomasville, N. C.

Virginia Home for Incurables, Richmond—H. C. Chase, Bedford City, Va.

Flushing Hospital, Flushing, N. Y.—Geo. T. Drivers, Rocky Mount, Va.; D. R. Dixon, Rocky Mount, N. C.

Dr. Coward Elected.

The South Carolina State Board of health has elected Dr. F. A. Coward director of the laboratory of the State board of health. This laboratory will be established in Columbia and will be located in the science hall at the State university. As soon as the university management learned that the laboratory would be located in Columbia the plans for the new building were changed so as to include a place for the laboratory. The university received enthusiastically the idea of co-operating with the State board of health.

Tulane Commencement.

The seventy-sixth annual commencement of the Medical Department of Tulane University was held in connection with the closing exercises of the other schools of the University, at the historic old French Opera House in New Orleans on the morning of May the twentieth, 1909. Degrees were conferred on 102 medical graduates. Their names follow: James Moore Adams,

William Benjamin Allums, Thomas Collins Austin, Julian Thompson Bailey, Purdy Sanford Bailey, John Lamar Beyt, Alphonzo Eugene Black, Stephen Mertle Blackshear, Chester Clyde Box, John Tillman Lampkin Boyd, Edward Bacon Brannin, Gibson Francis Brock, William Frank Brooks, Frederick Temple Brown, Charles Clifton Buchanan, Wyatt Thomas Burkett, Roscoe Owen Carter, Charley Hick Chapman, Harmon Jay Childress, James Clifton Cole, Albert Sydney Cooper, Nuckolls Thornton Davie, Walter Pettus Dey, Clarence Couch Elebash, Robert Jones Enochs, Wilson Joseph Eroche, George William Faivre, Robert Conway Finlay, Rufus Herschel Fisher, Isaac Flavius Littell, George Frederick Littlepage, Wallace Hanger Livingston, Wellington Locke, Basil Lee Lockett, Charles Parker Lynch, Robert Clarence McDonald, John Hardee McGuffey, Roman Daigre Martinez, Jeffrey Charles Michael, Walter Lee Miles, Edw. Taylor Miller, Weston Peter Miller, Michael Faustini Morvant, Samuel Faust Nabers, Everett Oscar Nichols, Fleming James O'Connor, John Malcolm Oglesby, Boney Wells Page, Joseph Herbert Page, William David Phillips, Joseph Talbott Prosser, Charles Edward Rew, Gibert Gabriel Fontenot, Wirt Dee Fowler, Allan Hubert Galloway, Paul Baston Gamble, John Sims Gibson, Americus Mack Gill, Claude Lester Goodall, Joseph E. Green, Frank Jos. Guenther, Tipton Adams Gunn, Albert Powe Hand, Hugh Winfred Hardy, Arthur Franklin Hoge, Earle Houston Hunt, James Thomas Hutchinson, Albert Sidney Johnston Hyde, Marion Franklin Johnston, Haston Varnado Jones, Kinchen Collins Knolle, Walter Eugene Knox, Jr., Hiram Watkins Kostmayer, Elbert English Laferty, Ertemon Lafleur, Jr., John Edward Lawton, Jr. William Walter Leake, Frank Montague Lett, Alden Hirn Letten, Robert Leslie Lewis, Brunner Burke Renaud, Frank Aquila Rogers, Isidore Bartholomew Rougon, Martin Albert Rush, Grover Cleveland Russell, Hugh Paul St. Martin, Rob't Maclay Smith, Dan Eli Staton, James Lavelle Wade, James Edward Wallace, Geo. Torrey Warren, Miles A. Watkins, Eli Moore Watts, Charles Joseph Watterson, John Perry White, Dee Melford Whitsitt, Robert Lee Williams, Ellison Holmes Williamson, John Williams Wilson, Benjamin Otto Witte, Thomas Edwin Wright, Van Glenn Yeager.

Marriages.

Dr. C. S. Floyd, of Loganville, and Miss Birdie Scott, of Norwood, Ga., were married at the home of Professor and Mrs. R. E. Carroll, in Stone Mountain, Ga., on May 6th.

Dr. George Alley Renn and Miss Sarah Elizabeth Tazewell Harris, both of Norfolk, Va., were married at the home of the bride's brother-in-law and sister, Mr. and Mrs. Henry Clifton Smith, on Little Bay, Va., on April 28th.

Dr. Renn graduated from the New York University in 1889, and since that time has been very successful in the practice of his profession.

Dr. Slocum R. Edwards and Miss Edna Mamie Hadley were married in Siler City, N. C., on May 18th. It was a very quiet home wedding, and immediately after the ceremony the young couple left for New York, Atlantic City, and other points north. The bride is the popular and accomplished daughter of Mr. F. M. Hadley, and the groom is a prominent young physician.

Dr. D. G. Blackman and Miss Maggie Powell, both of Crest View, Fla., were married on the evening of April the 30th.

Dr. Phillip Samuel Easley, of Thomasville, N. C., and Miss Annie Hall Flow, of Davidson, N. C., were married in the presence of a large assemblage in the Presbyterian church at Davidson, on the evening of May 19th.

Dr. Easley is a prominent young physician of this State. He graduated from Davidson College, N. C., class of 1904; North Carolina Medical College, Charlotte, N. C., class of 1907, and from Jefferson Medical College, Philadelphia, Pa., class of 1908. Dr. and Mrs. Easley left shortly after the ceremony for Washington and Philadelphia, where they will spend a week or two, after which they will visit relatives of the groom in Virginia before returning to Thomasville, where they will make their future home.

Dr. Virginius Dabney, formerly of Virginia, and Miss Ada Newlands, niece of Senator and Mrs. Newlands, were married in the Episcopal Church at Chevy Chase, Maryland, on May 18th.

Dr. Wilbur Calhoun Rice, of Coleman, Fla., and Miss Bessie Lula Johnson, of Asheboro, N. C., were quietly married at the home of the bride June 2nd, '09. Dr. Rice is a successful young physician, a graduate of the University of North Caro-

lina, both Academic and Medical Departments, and while a native born Tar Heel, he has lived for a number of years in Florida. The couple are at home since June 15th, Coleman, Fla.

Deaths.

Dr. Geo. Thrash, Jr., of Candler, N. C., a physician well known to that section of the State, died May 3rd. He had been ill for about two weeks, and two or three days before his death, an operation was performed in the hope of saving his life.

Dr. Thrash was about forty years old, and a graduate of Chattanooga Medical College. After graduating in 1891 he went to Asheville, N. C., and practiced there for ten years, later he located in Candler, where he continued to practice medicine in that section.

Dr. Wm. Taylor was shot and killed in West Point, Ga., by his step-son, M. B. Beck, on May 8th. Family troubles are reported to have been the cause of the shooting, but Beck refuses to make any statement concerning it.

Both men were residents of Lanett, Ala., and Dr. Taylor formerly resided in Opelika, Ala.

Dr. Paul A. Barrier, a well known physician of this section of North Carolina, died at his home in Mt. Pleasant, May 5th. He was stricken with paralysis about ten days before his death, and no hope had been entertained for his recovery since that time.

Dr. Barrier was 76 years old, and had been practicing medicine in Mt. Pleasant for 39 years. He was an excellent physician, and hundreds mourn the loss of a warm and genial friend, and Mt. Pleasant feels deeply the loss of an honored citizen.

Dr. Barrier graduated from Long Island College Hospital, Brooklyn, N. Y., in 1860, with the first class that was graduated from that institution.

Dr. E. S. Harrison, one of the most widely known physicians of Georgia, died at his home in Thomson, Ga., May 21st. A few days prior to his death, he was stricken with a severe attack of acute indigestion, which was the cause of his death. He was 62 years old.

Dr. Harrison graduated from the Medical College of Georgia, Atlanta, in 1872, and since that time has been very successful as a practitioner in his native State.

Dr. James W. Moore, an aged physician of Waterproof, La., died at his residence

on April 30th at 5 o'clock. Dr. Moore was well known in his section of the country, and his many friends will regret to learn of his death.

Dr. L. S. Hedleston, aged 79 years, died at the home of his daughter, Mrs. B. K. Kennedy, at Woodlawn, Ala., on May 19th. He was a well known physician, and practiced his profession until a few months before his death, which was due to old age. Dr. Hedleston practiced for a long time in the western part of Alabama, where he was widely known.

Dr. J. C. Mills, of Reidsville, N. C., died at his home about one o'clock in the afternoon of May 18th, after an illness of several months. Dr. Mills was a very eminent and successful physician of that section of the State. He was raised in Caswell county, and from the beginning of his practice of medicine, which was soon after the close of the Civil War, until about fifteen years ago, he practiced his profession in that county. He then moved to Reidsville, where he has been very successful as a physician.

Dr. Mills graduated from the Department of Medicine of the University of Pennsylvania, Philadelphia, Pa., in 1869.

Dr. Allen S. King, of Morgan City, La., one of the best known and most popular physicians of that section of the country, was shot and killed, in his office, by Leroy Olivier, a sixteen-year old boy, on the morning of May 19th. After firing two shots into Dr. King the boy walked to the court house and surrendered. The slayer is a son of the late Dr. Michael Olivier, who was also a prominent physician.

Dr. Thomas J. Happel.—Dr. Thomas J. Happel, of Trenton, Tenn., died of brain tumor at his home, May 24th, after a protracted illness. Dr. Happel was a native of Alabama. Born at Greensboro, Jan. 1847, he was therefore sixty-two years of age. A Confederate soldier when yet in his boyhood, at the close of the war he entered the medical department of the University of Virginia, from which he graduated in 1871. The following year he spent at New York University. He was a member of the American Medical Association, serving as vice-president in 1897, a member of the Board of Trustees since 1898 and chairman of the Board 1901 to 1908.

He served as president of the Tennessee State Medical Association, of the Gibson County Medical Association, the Tri-State Medical Association of Tennessee, Arkansas and Mississippi, and West Tennessee

Medical and Surgical Association. He was health officer of Gibson county for sixteen years, and president of the Trenton board of health for twenty-eight years and secretary and treasurer of the State Board of Medical Examiners since its organization in 1889, and during this time compiled and issued the State directory, which stands as a monument to his painstaking labor. He also served as vice-president of the Association of Southern Railway Surgeons, and the National Association for the Study and Prevention of Tuberculosis. He was for many years local surgeon of the Mobile and Ohio Railroad, and a member of the local board of pension examining surgeons.

For a number of years he had been a member of the Board of Aldermen of Trenton, and to him is given the credit of the high position that city holds in regard to paving, light, and water supply as well as low taxation.

Dr. Happel was always in the forefront of all work for the good of the community in which he lived, and the profession which he honored. He was known throughout the State and the South, and was universally beloved. Those who have had the pleasure of being associated with him will not soon lose the inspiration of this noble life.

Dr. Jno. M. Boyd.—Dr. Jno. M. Boyd died, May 16, at his home in Knoxville, Tenn., aged seventy-five years. His last illness, which terminated in meningitis, was more than his frail resistance could withstand. Graduating from the Department of Medicine of the University of Pennsylvania, in 1855, he had been actively engaged in the practice of his profession for fifty-three years, all of which he spent in Knoxville. It is said that Dr. Boyd, in 1859, performed the first successful supravaginal hysterectomy in the world's history. He was for a long time very active in the interest of education in his State. For thirty years he was a trustee of the University of Tennessee, and for a number of years he also was a member of the Board of Trustees of the State School for the Deaf and Dumb, of which Board he was president. In his death the State of Tennessee lost one of her noblest sons, and the medical profession an honored and learned member.

Book Notices.

Surgical Diseases of the Abdomen, with especial reference to Diagnosis. By Richard Douglas, M.D., Formerly Professor

of Gynecology and Abdominal Surgery, Medical Department, Vanderbilt University, Nashville; Ex-President of the Southern Surgical and Gynecological Association, etc. Second Edition, revised and enlarged. Edited by Richard A. Barr, B.A., M.D., Professor of Abdominal Surgery, Medical Department, Vanderbilt University. Octavo; 897 pages; 20 full-page plates. Philadelphia: P. Blakiston's Son & Company, 1909, Price, \$6.00.

The first edition of this work, 1903, was a masterly product of scientific critique, critical observation and excellent style. Douglas showed an unusual power of analysis and an ability to weigh theories and unproven data against clinical facts. His work was a delightful exposition of the diagnostics of surgical and borderland abdominal diseases.

In preparing this second edition Barr has preserved the original text, with only such changes as seemed to him to have been made necessary by actual progress of the last few years. The book is every respect up to date and we take pleasure in recommending it.

Eradicating Plague from San Francisco.

Report of the Citizens' Health Committee.

This is a lucid statement, in a well prepared volume of over 300 pages, of the work that has been done by the committee whose business it was to eradicate the plague from San Francisco, and take such steps as would serve to keep it out. There is a valuable fund of information in this book, as to how this committee went about its work, that will be of great value to any committee that undertakes a similar task elsewhere. This report illustrates the efficient work which has been done by the United States Public Health and Marine Hospital Service whenever the opportunity presented itself.

International Clinics. A Quarterly of Illustrated Lectures and especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, etc. By the leading members of the medical profession throughout the world. Edited by W. T. Longcope, M. D., Philadelphia, with many collaborators and with regular correspondents in Montreal, London, Paris, Berlin, Vienna, Brussels and Carlsbad. Volume I, Series 1909. J. B. Lippincott Company, Philadelphia.

Many articles of especial interest are found in this volume. One in particular that will attract attention is by Dr. Lawrence F. Flinck, entitled "The Hospital for Advanced Cases of Tuberculosis." A

number of interesting surgical papers are presented and are well worth the time of the busy practitioner. To the surgeon the article by Dr. W. G. MacCallum on "Absorption from the Peritoneal Cavity" will be of more than usual interest. The number of half tones and few colored plates add much to the book.

Appendicitis and Other Diseases of the Vermiform Appendix. By Howard A. Kelly, M. D. With 215 original illustrations, some in colors and three lithographic plates. Philadelphia and London: J. B. Lippincott Co., 1909. Price, \$6.00, net; 500 pages.

The first edition of Dr. Kelley's great work was issued by another publishing house in 1905, and had a record sale. Its popularity was immense. The Lippincott Company now present a new, revised and greatly improved edition, which is as near perfection as art can make it,—in point of text, clear, strong type on the highest grade of book paper and bound substantially, tastefully, artistically. The work is too well known already to warrant a detailed review of its contents. It is an encyclopedia within itself; an exhaustive treatise on the subject, covering every possible phase; history, from the first reported case; anatomy of the appendix, copiously illustrated with most excellent drawings from life, from that of the human embryo of six weeks; physiology, bacteriology, pathology, etiology, clinical history, diagnosis, differential diagnosis, leucocytes in; appendicitis in typhoid, in youth and old age; typhlitis, treatment previous to operation; operative treatment, abscess in the vicinity of; peritonitis, care of patient after operation, and postoperative sequelæ; appendicitis in gynecology and obstetrics; neoplasms; specific infections of appendix; hernia of; medico-legal aspects of. Under each of these twenty-five heads the lecture is clear and full and leaves absolutely nothing to be said on the subject.

The Transactions of the Sixth International Dermatological Congress: Edited by Dr. John A. Fordyce, Secretary General. New York: The Knickerbocker Press. 1908. Pp. 944.

This is the official report of the proceedings of the International Dermatological Congress that was held in New York from the 9th to the 14th of September, 1908. It contains a list of the officers and members of the congress, all the papers presented, with stenographic reports of the discussions of them and of the various *ex tempore* addresses delivered, together with lists of the

cases shown and the photographs exhibited.

An idea of the valuable work done by the congress may be formed by noting that there were about a hundred papers presented, a hundred and twenty-eight patients shown, and hundreds of photographs exhibited. The scope of the work is shown by the great varieties of titles. The schemes selected for general discussion were three, namely: 1. The aetiological relationship of the organisms found in the skin in the exanthemata. 2. Tropical diseases of the skin. 3 (a). The possibility of immunization against syphilis; (b) the present status of our knowledge of the parasitology of syphilis.

Conservative Gynecology and Electro-Therapeutics, a Practical Treatise on the Diseases of Women and their Treatment by Electricity. By G. Betton Massey, M. D., Attending Surgeon to the American Oncologic Hospital, Philadelphia; Fellow and Ex-President of the American Electro-Therapeutic Association; Member of the American Medical Association, etc. Sixth edition, thoroughly revised. Royal octavo, 462 pages. Illustrated with 12 original full-page chromo-lithographic plates and 15 full-page half-tone plates of photographs taken from Nature, and numerous engravings in the text. Bound in extra cloth. Price, \$4.00 net. F. A. Davis Company, publishers, 191+16 Cherry St., Philadelphia, Pa.

"No one can gainsay the results of electro-therapeutics. Many professional men do not use electricity because they have not been trained to it as they have been trained to dissect, to incise abscesses, to set a fractured limb and the hundred and one other practical things they are taught at college and in the hospital. Electricity is a handmaid of medicine, and he who learns how to subjugate her and make her obey his behests will relieve and cure lots of suffering. Dr. Massey's book is designed to fill the vacuum of the college curriculum on electro-therapeutics. This book gives in a clear and masterly fashion the details from an electro-therapeutic stand-point of the gynecological treatment of disease. There is a definite field for electro-therapeutics—perhaps not as wide as some of its enthusiastic members may think, yet nevertheless there is something in it. This work will give you a clear idea of how it may be used and where it may be used. As such we recommend it to our readers."

The April Lippincott's.

Spring has officially arrived, and all the earth is a-throb with new life and renewed

vigor. Even in reading matter the demand is now for something stirring, lively, with plenty of action in it. These requirements are admirably fulfilled by the April Lippincott's. Its most important feature is, perhaps the complete novel, "The Clue," by Carolyn Wells. This is a detective story, and no better one has appeared in a long time. The plot is based on the murder of a young heiress on the eve of her wedding day, and the subsequent efforts to apprehend the guilty party. Various persons are suspected in turn, but not until the services of the detective, Fleming Stone, are enlisted is the mystery solved. Fleming Stone, by the way, figured prominently in a previous detective story by this author—"A Chain of Evidence," also published in Lippincott's Magazine. It is not too much to say that Miss Wells has never written anything better than "The Clue." The plot is remarkably ingenious, the denouement unexpected, the characters ably drawn, and the whole tale brimful of action, keeping the reader's interest keyed up to the highest pitch. Yet while it is strongly dramatic throughout, the tale is not characterized by unrelieved gloom, a charming love story and many touches of humor serving to enliven it.

Among the short stories, Augusta Kortrecht's "The Little Fat Skeleton" stands out prominently, being both novel and humorous. "Woman Disposes," by George Allan England, is another remarkable tale. Others worthy of special mention are "The Captain's Charm," by Anne Warner; "The Freight That Went South," by Caroline Lockhart; "Miss Cluny of Cartmel," by Will Levington Comfort; and "The Apparition," by Ella Wheeler Wilcox.

Harvey B. Bashmore contributes a serious but interesting paper entitled "In the Day of the Cave Men." This is the only special article in the number, except for three brief ones in the "Ways of the Hour" department—"The Western Story," by Ellis O. Jones; "A Fresh Calamity," by Clifford Howard; and "Open-Faced Diplomacy," by Phil. Collom.

Poetry by Josephine Morris Rowan, Caroline Wood Morrison, Dixie Wolcott, and Francis Marquette, and the sixteen-page humorous section, "Walnuts and Wine," complete the number.

Aiming High.

John Allen, of Topeka, who while in Congress used to be known as "Private John," enjoys telling of a unique character near his home known as Jasp White.

Jasp had lived in single-blessedness a good many years, but finally in the evening

of his life he married, and in due time an heir was born to him. The day after this momentous event Mr. Allen met Jasp in the street.

"Yes, suh," chuckled Jasp, "we's already decided on a name."

"What's it to be?"

Jasp traced one toe reflectively in a semicircle before him. "You know, sah," he said finally, "I 's allus been a pow'ful han' for dem Scripture folks, an' so I's decided t' name de kid after some o' dem big officers what de Bible talks 'bout. I's settled on de name Beelzebub."

"Beelzebub!"

"Yes, suh, dat's de name!" announced Jasp, in a tone betokening finality. "Beelzebub 's a mighty fine name, suh. It shore like I 's aspirin' pow'ful high, but I figgers dat boy 'll shorely do credit to his namesake!"—June Lippincott's.

Review of Southern Medical Literature

The American Practitioner and News, April, 1909.

Surgical Tuberculosis.—Dr. J. R. Wathen thus describes the use of Bismuth Paste:

This method consists of the injection into the tubercular tracts of a paste of bismuth subnitrate and vaselin. Then the patient is radiographed and a complete map of the infected area is obtained for operative consideration. Beck, in commenting on his method says: "The injection of liquified bismuth vaselin paste is not only valuable for diagnostic purposes, but for curative purposes as well. The first case injected for diagnostic purposes led us to this important discovery."

Ochsner, and many other prominent surgeons, have reported good results from this method after a rather extensive experience. Concerning this treatment, which of late has attracted so much attention, Beck has drawn the following conclusions:

1. A successful surgical operation of fistulous tracts depends principally upon the exact knowledge of the extent and direction of the sinuses before operation is undertaken.

2. Radiographs taken after the fistulæ have been injected with bismuth paste show distinctly the extent and direction of the fistulous tract

3. Skiagraphy of all fistulous tracts should be taken before an operation is decided upon.

4. Fistulous tracts, tubercular sinuses, or abscess cavities, including empyema, can be cured by injection of bismuth paste.

5. Cavities or fistulæ should be as clean and as dry as possible before the injection of bismuth paste.

6. The bismuth paste, when mixed with wax or soft paraffin and injected in liquid state, solidifies in the fistula and serves as a framework for new connective tissue. The paste is absorbed and the fistula obliterated.

7. Bismuth paste injection will not heal out sinuses where sequestra are present. Same must be removed before injection.

8. The bismuth paste injections are painless and produce no unpleasant or dangerous symptoms."

The Southern Clinic, April, 1909.

Large Doses of Iodide of Potassium in Respiratory Diseases.

—Dr. J. Meriweather says that the advantages claimed for the use of iodide of potassium is that the change in the patient takes place by lysis instead of crisis in from thirty-six to forty-eight hours. Every danger point passed such as over-distention of the right ventricle, the temperature becoming normal or nearly so, the pulse reduced from 140 beats to 90 or under, the pain relieved, the respirations reduced from 50 or 60 per minute to normal. The improvement will be so marked that the family will see that the patient is in a more favorable condition, and as the patient's respirations becomes much better it also causes like respirations in both the family and physician.

Texas Medical Journal, April, 1909.

Some Remarks on Lacerations of the Perineum.

—Dr. A. Lindecum points out that it has been the rule among country obstetricians, in the past, to neglect the repair of recent lacerations of the perineum; usually treating them with a dressing of carbolyzed olive oil or some mild antiseptic, and allowing them to heal by granulation, thereby resulting in a massive cicatrix, leaving the vagina without a floor to support the uterus and appendages, resulting in prolapsus, procidentia, cystocele, rectocele, or the various malpositions of the pelvic viscera.

Such negligence, in the writer's opinion, is criminal, and my earnest plea is for a more thorough attempt at the prevention of lacerations of the perineum, and when they do occur for their immediate repair.

After going over the points thoroughly the author draws the following conclusions:

1. By educating the laity to the importance of scientific care of cases we can thus reduce the predisposing causes of lacerations to the minimum, and by careful assistance to the parturient woman we can

reduce the occurrence also.

2. By rigid asepsis, and thorough preparation of the surfaces before approximation, and by perfect care in executing the work, using only the best suture material, we render the possibility of interference from infection and leakage quite small.

3. By the very best of after care being scrupulously clean we expect only good results.

Our Unfortunate Insane.—Dr. G. I. Kings believes that the person of unsound mind or *non compos mentis* is of no further benefit to society or mankind. The asylums are to restrain and cure. If the patient can not be cured, he should be restrained, and if the institutions we now have to accommodate the unfortunate of our State do not accommodate them, it seems that the Legislature should be prevailed upon to provide sufficient accommodations, that all may be taken care of. These people should become wards of the State and should all be placed under State care and treatment, and, in my opinion, a large part of the responsibility for the lax dealings with patients now prevailing in the State is due to the careless neglect on the part of the practicing physicians who are brought into daily touch with the present conditions and evils springing therefrom. They should agitate the matter until the public conscience is awakened.

Alabama Medical Journal, April, 1909.

Spectacle Fitting in Ophthalmology.

—Dr. S. L. Ledbetter says that with the ophthalmologist, spectacle fitting, while a very important feature of the work, is more or less an incident and not the main idea; therefore he can not in any sense become a competitor of the advertising optometrist. But there is one thing the ophthalmologist could and should do. In fact, the medical profession generally should insist upon the optometrist limiting his ads to spectacle fitting, and cut out all reference to the curing of headaches, indigestions and the correcting of muscle irregularities, etc. These subjects should come under the domain of medicine and should not be hawked about by every little graduate optician and traveling optometrist who takes it upon himself to inform the public through the press of his wonderful success and skill as a refractonist.

Pellagra.—Dr. C. M. Rudolph says that the pathological findings so far are very deficient; however, the following have been reported: Degenerative changes and particularly atrophy and fatty degeneration of the liver, kidneys, spleen, intestines and lungs; pigmentary deposits in the ganglion

cells, the muscles of the heart, the hepatic cells and the spleen, atrophy of the muscular coat of the intestines with occasional hyperemia. In the nervous system degenerative changes occur in the lateral columns of the spinal cord, a condition which seems to be peculiar to the disorder. It is most pronounced in the dorsal region. A degeneration is also noted in the cervical and dorsal posterior columns. Changes in the lumbar cord and brain are generally negative; in the brain, however, fatty degeneration or calcification of the intima of the small vessels have been observed; also, pigmentation in their adventitial coats.

Skin Changes.—Red spots first appear, which quickly become vesicles or large irregular shaped bullæ. These latter turn dark and desquamate, leaving the surface beneath red, pigmented, thickened, rough and fissured.

Blood Changes.—There is marked anemia and such changes as occur in that condition are to be noted.

Eye Changes.—Contracted pupil, shallow anterior chamber, obstruction to the lachrymal duct where the mouth and posterior nasal inflammation is very pronounced.

Maryland Medical Journal, April 1, 1909.

The Present Status of Tuberculosis Work Among the Poor.

—Dr. Mary E. Lent and Ellen N. LaMotte claim that the Instructive Visiting Nurse Association of Baltimore was the first district nursing association to place a special tuberculosis nurse in the field.

1. Instruction of the patient in regard to the nature of the disease, the value of food, rest and air, the use and disposal of sputum cups, fillers, handkerchiefs, pockets, disinfectants and the like, supplied by the nurse. Milk and eggs, warm clothing, beds, and coverings, and such things as may be necessary for carrying out the open-air treatment, provided through charitable agencies.

2. Instruction of the patient's family in regard to the nature of the disease; the necessity for isolating the patient by giving him a separate room, or, if this is impossible, a separate bed; the care of utensils and clothing used by the patient, and all other necessary points which concern either the comfort and well-being of the patient or the prophylaxis of the disease.

3. Registration with the State Board of Health of all cases diagnosed; report made to the City Health Department of all houses or rooms in which tuberculous patients have died or from which they have been removed, in order that these places may be fumigated.

How the Public Can Help the Medical Profession to Fight Disease.—Dr. G. M. Leuthicum among other important suggestions says that the subject of heredity, the striving for an ideal in human attributes, should be the aim sought by parents to inculcate in their sons and daughters. Health should be the watchword. Far better would it be for you and yours were parents to devote their thought to encouraging marriage between healthy adults and discouraging it in those physically unfit.

Woman, in my opinion, should have three important duties in life to perform—first, to marry if fit, and to marry a man fit; second, to have children, and, third to secure a suitable partner for her children. I believe in parents being matchmakers. There will, of course, be about 5 per cent. who remain single for one reason or another. God bless them! I don't know what we would do for teachers nor how we would fill many of the places so well filled by the unmarried woman. The bachelor is a misfit.

Better by far to endow your children with health than wealth, as upon this will depend the future of the race.

The Virginia Medical Semi-Monthly, April 9th, 1909.

The Surgical Treatment of Hemorrhoids.—Dr. L. Elliot believes that in rectal diseases palliative measure are not, properly speaking, conservative surgery. While this is true, there are a great many persons suffering from hemorrhoids who lack the moral courage to submit to an operation for a trouble that rarely endangers life. Aside from motives, which frequently urge the adoption of such measures by the advertising man, or the timid operator, physical conditions, nervous states, social engagements and business arrangements operate to the delay or postponement of radical measures. Many patients reach a ripe old age, carrying the while a bunch of hemorrhoids as large as half the size of an adult fist, with only temporary and occasional inconvenience; these patients are those who have refused surgical aid and rely on ointments, suppositories, astringents, and rest in bed for relief, nor can we blame them. Hemorrhoids seldom, if ever, result fatally; where death occurs it is the result of other causes. When, however, the loss of blood from hemorrhoids causes anemia and is an exhaustive drain upon the system, palliative treatment cannot cure, operation is demanded.

Tuberculin in Incipient and Concealed Tuberculosis.—Dr. M. D. Hoge thus de-

scribes the method used: The skin of the arm or forearm is washed with soap and water, then with alcohol and allowed to dry. Two small superficial scarifications, two inches apart, are made on the clean skin, with a lancet or needle, just deep enough to avoid drawing blood; the tuberculin solution is carefully applied to one place, allowed to remain fifteen minutes, and gently wiped off with a piece of sterile gauze or cotton. Nothing is put on the second scarification because this is used as a control. If the reaction is positive, during the first twenty-four hours there will be some rise of temperature from 99 1-2 degrees F., to 100 1-2 degrees F., slight frontal headache, and on the inoculated spot there will be the characteristic pinkish or reddish induration, circular in shape, about one inch in diameter, the central portion somewhat elevated, and not infrequently showing minute vesicles.

If on the contrary, the reaction is negative, none of these symptoms or signs will be observed, and both scarified places heal over in from one to two days as any other scratch would do.

Emphysema of the Maxillary Bone.—D. C. P. Jones claims the following advantages for the intra-nasal operation in these cases:

1. The whole of the body of the inferior turbinate is left intact—a valuable part of the anatomy. This body has more to do with the greatest function of the nose than any other structure, i. e., the warming and moistening of the inspired air, thus fitting it for reception by the lungs.
2. The absolutely perfect drainage afforded the antral cavity, and thereby facilitating its washing by the patient in his own home.
3. The perfect ventilation, inspired pure air—nature's antiseptic—can perpetually get in its good work, and prove a *vis medicatrix naturæ*.
4. The almost perfect protection afforded the opening of the antrum, acting as a shield hanging from above and backward, preventing the entrance of secretion when the nose is blown.
5. The access to all parts of the antrum by the finger and curette, thus preventing the wounding of the infra-orbital nerve—a no small blunder when, by accident, this is done.

A Case of Abdominal Gun-Shot Wound with Intestinal Perforations, with Special Reference to the After-Treatment with "Saline Drip."—Dr. Maddox says that it has been demonstrated that irrigation, sponging and ordinary drainage is insufficient in this class of patients, as the

peritonium absorbs the infectious material too rapidly. The object then must be to make an excreting instead of an absorbing membrane. For this purpose, I think the "saline drip" is superior to all other methods, and the technique is so simple that the novice may operate it with the greatest ease. An ordinary fountain syringe with a rectal tube, or large catheter is all that is necessary. The syringe should be elevated only about two feet above the level of the patient, and the clamp should be so arranged that only one drop of a normal saline solution should drip into the bowel about every second. Should this quantity prove to be more or less than is required, the clamp on the tube can be regulated accordingly. The solution should be kept warm, if possible, as this will materially aid absorption from the bowel.

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Gaillard's Southern Medicine, April, 1909.

Paranora.—Dr. B. Tucker says that these are the individuals who are the bane of the existence of officials and other public people. They are the men whose continual suits without substantial foundation first perplex and then annoy the courts. The promoters of a new religion; the lovers who follow an actress for years and shower them with erotic epistles; the inventors who have discovered a perpetual motion machine; the individuals who have a new system of government to foster, and the people who are always persecuted and against whom combines are working, and the motiveless murderers. If we take the past history of these individuals, as widely separated as their peculiarities are, we usually find them strikingly alike. If we study their present mental state, we find a connecting link between them. If we watch their futures, we learn that they follow very much the same course.

Trauma's of the Brain.—Dr. J. S. Harsley points out that the differentiation between cases of hemorrhage and destruction of the brain substance is important, as the treatment often differs. When hemorrhage is the chief, if not the only feature, there is always an interval of course, upon the rapidity of the hemorrhage, but is rarely greater than a few hours. There are often several hours of a stupid state before the patient becomes completely unconscious or paralyzed. In hemorrhage the temperature seldom goes over 101°, though in the earlier stages it is usually sub-normal. The pulse is full and slow at first, but later becomes weak and rapid. This phenomena has been satisfactorily explained by Cushing as being a conservative effect on the part of

nature to maintain nutrition to vital centers in the brain. When the pressure from a blood clot becomes so great as to threaten the nutrition of the brain by pressure upon its blood vessels, the brain sends out impulses which raise the general blood pressure and increase the force of the heart. This tends, for a time at least, to overcome the extra resistance put upon vessels of the brain by the pressure of the blood clot until finally exhaustion sets in, the high blood pressure can no longer be maintained, and the pulse becomes rapid and of less force; but as the pressure still remains upon the brain the vital centers are affected and death ensues unless prompt relief to cerebral pressure is given.

———
New Orleans Medical and Surgical Journal, April, 1909.

The Nervous and Mental Effect of Masturbation.—Dr. E. M. Hummel thus summarizes, in part, the above paper:

(1) That the masturbation of young children is merely a form of specialized tickling without true or major sexual excitement, and practically without morbid results.

(2) That the same practice in the adult female partakes usually somewhat of the nature of that of children, as the deeper sexual emotions do not seem to be enlisted in the act. But in some women masturbation is a deeply sexual affair, however. In instances of excessive indulgence certain alterations in the affective character are observed, such as aversion toward the male sex, inability to experience natural libido, morbid fondness for solitude, sensitiveness about matters of sex and a tendency to attach a sexual significance to irrelevant things, loss of countenance, etc.

(3) That in the male normal sexual indulgence as well as masturbation implies a higher pitch of erethism and a greater expenditure of nervous energy. The climax of excitation in masturbation is higher than in normal intercourse, and for this reason more of an insult to the cerebro-spinal centers. Excessive venery is harmful to nervous health and incompatible with a high order of mental capacity. Masturbators suffer like consequences to a greater extent.

(4) Masturbation, then, may most properly be assigned as a sole exciting cause of some neurasthenic states, certain perversions of normal sexual inclination with more or less functional impotence, and reductions in character tone. The most profound nervous or mental result ever observed by the author as a consequence of masturbation was a profoundly neurasthenic and psychasthenic state with light dementia, in which the patient was so de-

bilitated that he easily succumbed to a trifling intercurrent malady.

A Comparative Study of the Blood Culture and Agglutination Test in Typhoid.

—Dr. R. Lyons gives the following conclusions:

1. The work on blood cultures done in this laboratory and the results of others show that the blood culture is the most reliable means of making an early diagnosis in typhoid.

2. If, for some reason, it is impracticable to take a blood culture an ear culture should be done, as its value has been well proved, and it unquestionably comes next to the blood culture in importance.

3. If the above methods are not possible, as when blood is sent into a laboratory for the agglutination test, it is highly advisable after using the serum for the Widal, and especially if it be negative, to try Fornet's clot culture, as the chances of making a diagnosis will be considerably increased; and since an early diagnosis in this disease is so important, no methods, which appear to be of value, should be left untried.

Antigonococcic Serum.—Dr. Charles Chassaing after reporting three selected cases says that most of the remaining cases were varieties of the same type; chronic urethritis complicated with more or less prostatitis, vesiculitis, rheumatic pains in muscles, tendons, or joints, together with some degree of debility or neurasthenia. They were treated locally in the usual way, together with the injections of antigonococcic serum as previously mentioned. All but one improved to a greater extent or more rapidly than the analogous cases which were treated at the same time by means of local treatment alone. The exception was in a patient whose case had been dragging along with very little improvement and which did not progress any faster with the serum.

It will be realized at once that this statement must be made with some reserve, as it is difficult to estimate accurately how a given patient would have responded to local measures.

It was noticeable that the more pronounced the toxemia, or what might be termed the general symptoms, the more decidedly did the good effects of the serum become apparent. This notwithstanding the fact that there is no evidence that it is "in any sense an antitoxin."

Virginia Medical Semi-Monthly, April 23rd, 1909.

Some Accepted Facts and Mooted Points in the Management of Appendicitis.—Dr. Stuart McGuire says that per-

sonally he is convinced that Murphy was right in his bold and dogmatic statement made many years ago, that we should operate on all cases of appendicitis as soon as the diagnosis is made. There are, of course, a few cases where this rule will work hard-ship, but if it is rigidly followed, it will accomplish the greatest good to the greatest number, and that the surgeon who follows it will, in the end, save more patients than the one who does not.

Ochsner, by his teaching, has, in my opinion, caused the death of more patients with appendicitis than his personal ability as an operator has enabled him to save, and this not because his teaching was wrong, but because it has been misunderstood, and his treatment misapplied. Ochsner believes in operating on all cases of appendicitis, but in a certain class he advises waiting, employing gastric lavage, rectal alimentation, and Fowler's position, until the inflammation becomes localized, and the patient in a more favorable condition for surgical intervention. Ochsner's treatment will save some cases which would otherwise be lost, but despite this fact it would be better for the profession and for the public if his teaching had never been disseminated. It has been seized upon by the general practitioner as a medical cure for appendicitis, and has been the excuse for procrastination which has filled many an untimely grave.

Medical Treatment of Tic Douloureux

—Dr. B. R. Tucker says: First. That malaria and rheumatism have been prominent factors in causing tic douloureux in these cases.

Second. That in these cases sodium salicylate proved of marked benefit in the rheumatic cases and quinine in the malarial cases, and further, that to get the result these drugs must be pushed to the limit of tolerance.

Third. That in these cases the effect of treatment is enhanced by rest in bed for a week, purgation, and a nourishing but not over rich diet.

Fourth. That as a general conclusion, in the writer's opinion, medical means should first be tried, then alcohol injections; if these are not effective, then the peripheral operation performed. If relief is not then obtained, the serious Gasserian ganglion operation may be performed as a last resort. This is because of its immediate danger, because it substitutes anesthesia for pain and because of the pan-opthalmia and other trophic disturbances which sometimes follow the operation.

Different Rings Obtained with Heller's Test for Albumin.—Dr. E. F. Rodriguez says that in the case of albuminous urine,

a milky ring, more or less distinct, with sharply defined borders will appear just at the line of demarcation. At times the reaction is delayed a few minutes.

In the case of urine highly charged with urates, a milky ring will be seen at the middle of the column of urine, above the line of junction of the acid with the urine. The superior margin is not well defined.

In the case of urine rich in urobiline, instead of the albuminous ring, Gubler's *hemaphic* ring will be seen, of a dark mahogany color, indicating, when well accentuated, active destruction of the red-blood globules.

A fine, greenish-black, delicate ring, better seen on refraction, over a greenish band, called by the author *hepatic line*, is to be usually observed in cases of slow hepatic processes.

Abstracts of the Leading articles of the month.

The Conjoint Use of Tuberculin and Arsenic.—Mendel (Munchener medicinische Wochenschrift) says that it is well known that arsenic (like iodine and mercury) shows a tendency to collect in large quantities in inflamed tissues, and secondly, that tuberculin in moderate dose causes an inflammatory zone immediately surrounding the tuberculous areas. By administering them together we may thus cause a deposition of arsenic around and in the tubercular tissues, where its presence is desired.

To avoid local reaction the substances should be given intravenously, and may be given together. It has been shown that the agglutination reaction reaches its height eight days after tuberculin injections, and they should therefore be given at this interval. The arsenic should be given every other day, and tuberculin added to every fourth injection. The author uses atoxyl in doses of 5 to 30 centigrammes and slowly increased doses of tuberculin. These should call out merely a slight and fugacious febrile reaction. The results of this treatment have been remarkably good in most cases of tuberculosis of the lungs, although in a few instances it has had but little effect. It should probably not be used in febrile cases,

Purin-Free Dietaries and Gout.

The British Medical Journal says that foods which contain little or no protein should be the first to be discarded and the last to be resumed. Unfortunately, however, these are the foods which provide the pleasurable and stimulating effects of eat-

ing. It is thus an advantage not to change the dietary too abruptly, and for a fortnight or so the patient should be advised to restrict slightly the amount of food taken and to eat fish or meat once a day. With regard to drink, not more than two small cups of tea or coffee or chocolate should be taken daily. Soups, beer, ale, and porter ought to be avoided, but claret, Burgundy, hock, whisky, or gin may be substituted when there are no conscientious objections to them. For total abstainers quassia or other bitters are useful, but fermented temperance drinks are not well tolerated. Condiments may be permitted unless renal conditions contraindicate their use.

After this probationary period the "purin-free" diet may be prescribed. The term "purin-free" is, however, a misnomer. A precisely "purin-free" diet would be composed of milk, eggs, white bread, cheese, butter, and a few vegetables; but when the milk contains many cells, as it often does, and the eggs are not absolutely fresh, as they often are not, their purin content comes within the range of our present chemical methods. Because a food is poor in purin we have assumed in the past—and probably have erred in doing so—that it could not disturb the general purin metabolism; we have yet to learn whether this is so or not. We are really dealing, therefore, with a dietary which is designedly poor in purin. For this purpose the following foods are at our disposal: Milk—fresh, soured, buttermilk, or whey; eggs—boiled, poached, scrambled, or raw; white (not brown) bread and butter; macaroni and cheese, rice, tapioca, and vermicelli. Suet may be used for puddings of all kinds, such as currant or jam roll, treacle, apple dumpling, etc. Pastries, pancakes, jellies, and the usual tea cakes are also available. All vegetables, except the pulses (peas, beans, and lentils) are poor in purin. Practically all fruits may be permitted. As to drinks, tea, coffee, and cocoa are excluded, and hot water, claret or Burgundy, mineral waters, or hot milk may be substituted. Beer and porter should be discontinued, and alcohol diminished as far as the usual habits make possible. Condiments are generally craved for, and there is nothing to be gained by withholding them unless they are otherwise contraindicated.

After a month or so of this diet a return to the usual form of human food should be attempted. Brown bread, oatmeal, wholemeal, beans, peas, nuts, asparagus, or mushrooms may be gradually added. If it is desired to employ vegetable protein only, then these latter foods should play a large part in the dietary. When animal protein is preferred, sweetbread should be the first

kind of meat allowed, since the purins contained in sweetbread are "bound purins," and are badly absorbed, the greater proportion passing out in the feces. Later, cod-fish, sole, plaice, mutton, and chicken may be permitted; salmon, halibut, and beef and pork being reserved for later periods. When meats are again taken they should be stewed, not roasted, and milk sauce substituted for the meat gravies.

Even when a return to full diet is made it is well to restrict tea, coffee, and cocoa, and to limit soups. With regard to extracts, there is little to choose between any of the obtainable preparations. The purins of yeast extracts are less well absorbed than those of meat extracts, and theoretically are less harmful, but the differences are exceedingly slight.

It will be evident that the prescription of a diet poor in purin calls for careful observation on the part of the physician. The danger-signals of starvation, of glycosuria, and of mental bias should always have attention, and a return to the average dietary should be the object aimed at. Much information may be gained by the daily determination of the total purin output by clinical methods, but when this is impossible the weight and general condition of the patient may afford useful information. A probable result of the treatment will be a diminution of the amount of protein consumed, but the quantity of food necessary for the maintenance of life and for the provision of latent resistance to disease varies with every individual, and with the same individual at different periods of life, so that it is well to realize that rigid prescriptions and rules as to food are but rarely applicable, and that the percentage of good results from the use of a diet poor in purin depends largely upon the sagacity of the physician, and even then is not so high as the enthusiast suggests.

Condition of the Heart and Lungs after

Abdominal Operations.—A. von Lichtenberg (*Wiener Med. Wochenschr.*) has investigated 100 cases to determine the condition of the heart and lungs after a variety of abdominal operations. His conclusions are as follows: 1. Post-operative pulmonary complications in an absolute sense are far more frequent than has been previously assumed on the ground of the existing statistics, since their presence may entirely escape observation in a large number of cases. Slight transient elevations of temperature during the first days after aseptic operations are usually due to such occult pulmonary complications. 2. The post-operative changes in the lungs, as discovered in the author's examinations, cannot

be considered as post-operative pneumonias in the ordinary sense. They constitute rather a favorable soil for development of such complication, and in the absence of contributory factors, may recede in a few days without causing much mischief. 3. The great majority of pulmonary complications occur shortly after the operation, and can be determined by physical examination on the second, third or fourth day. 4. The method of anesthesia has no influence upon their frequency of occurrence. Cases of anesthesia pneumonia are very rare. 5. For the vast majority an embolic origin must be assumed; occasionally there are hypostatic forms. 6. Marked cardiac lesions appear to play a less important part in the etiology than comparatively slight changes in the vascular system and myocardium, which deserve to be more carefully observed from an etiological point of view. 7. Changes in the area of pulmonary resonance in the first few days after operation may be indicative of the presence of occult pulmonary complications. 8. The condition of the blood pressure in connection with other existing signs enables one to determine the state of the circulatory organs in cases subjected to operation and to improve their functions to proper medicinal treatment.

Human Glanders.—Bernstein and Carling (*British Medical Journal*) describes in considerable detail six cases of human glanders, and from their study observe that there is but one factor common to all six, namely, an occupation bringing the individual in more or less connection with horses. In all but one there was in addition a degree of prostration quite out of proportion to the clinical signs. In three of the cases diagnostic injections of mallein were employed. In all a typical reaction followed. In two instances injections of tuberculin were given as controls, but in neither was there any response. In several cases which turned out not to be glanders the mallein test produced no reaction, including one case of generalized tuberculous subcutaneous abscesses, which did give a typical "tuberculin reaction."

The dose usually given was 10 to 15 minims, and was followed in a few hours by a typical rise in temperature with pain at the point of injection and at the site of the lesion.

For practical purposes animal inoculation is the most reliable diagnostic procedure. In four of the cases reported it was tried with positive results, and in one the diagnosis was not arrived at until this was done, it being impossible to isolate any characteristic organism from amongst so

many contaminating bacteria that occupied the ulcerated surface. In these contaminated cases it is better to inoculate an emulsion of the suspected tissue subcutaneously into the abdomen of an adult male guinea-pig. If inoculated intraperitoneally the contaminating germs may cause death from peritonitis before the characteristic enlargement of the testes with acute inflammation and engorgement of the tunica vaginalis can be produced. The reaction was noticeable in seven to ten days as a rule. In some few cases it was delayed for several weeks. In others it had not been obtained at all. It is advisable to make cultures on potatoes simultaneously with the animal inoculations. The animals selected should be adult males and varying doses should be inoculated. *B. malleoli* are generally very scanty; even in acute abscesses it may be impossible to find them. Hence if the pus of such an abscess is found to be sterile a glanders infection should be borne in mind. In contrast to the difficulties of bacterioscopic diagnosis the cultural characteristics are so definite and so constant as to render the diagnosis simple. Smears of pus, which is generally uncontaminated in unopened abscesses or farcy buds, on glycerin-agar produce in twenty-four hours a gelatinous confluent growth, and on potato a brownish growth in forty-eight hours, which later darkens, and after some time may become a chocolate tint.

As to the mode of infection, the hypothetical paths are by direct inoculation through the wound, through the hair follicles, by inhalation or by ingestion. Wound infection is conclusively proven by laboratory accidents. Indeed, glanders has been assigned as the most frequent cause of accidental death amongst laboratory workers.

To find a gelatinous pus in an abscess occurring in a patient whose occupation and illness had already aroused a suspicion of glanders would be confirmatory, but in itself this phenomenon cannot be regarded as of high importance.

Stress should be laid upon this because a common termination of a chronic case is, in acute outburst, fatal from its inception.

Glanders exhibits protean symptoms. The distinction from syphilis and tuberculosis is extremely difficult. Glanders is more rapid than tuberculous lesions and exhibits, moreover, a tendency to spontaneous healing. The distinction between chronic glanders and syphilis cannot readily be made, since of all drugs vaunted in the treatment of glanders mercury is the only one for which success can be claimed with any show of reason.

Ocular Complications of Scarlet Fever and Diphtheria.—Parsons (The London Practitioner) says that ocular complications of scarlet fever are not frequent. Among those which occasionally do occur are conjunctivitis, ulcerated keratitis, which may destroy the eye; abscess and gangrene of the lids; complications secondary to scarlatinal nephritis, of which uræmic amaurosis is most frequent; retinitis, embolism, optic neuritis, orbital cellulitis, which are of very rare occurrence. The writer says membranous conjunctivitis is the most frequent ocular complication of diphtheria. As the xerosis bacillus cannot be differentiated morphologically from the Klebs-Loeffler bacillus, the writer suggests that membranous conjunctivitis may be caused by the former bacillus. Associated with the diphtheritic bacillus in this disease are usually found streptococci, staphylococci and other pathogenic micro-organs. Gangrene of the lids, diphtheria of the lacrimal sac, dacryoadenitis, orbital abscess and optic neuritis may rarely occur. Post-diphtheritic paralysis may involve the ciliary muscle and the iris, and hence it is highly important that children who have had diphtheria should have both their distant and near vision tested before having a mydriatic used.

An Operation for Paralytic Calcaneocavus.—Jones (Liverpool Medico-Chirurgical Journal) notes that paralytic calcaneocavus is of all others the most intractable to treat. It may involve complete, or only partial, paralysis of the calf muscles, and be accompanied by paralysis of some or all the other muscle groups. The heel is depressed, and often continues in the line of the tibia, the posterior aspect of the os calcis becoming the inferior, while the hollow foot is dependent upon the depression of its anterior part at the mid-tarsal joint. As the toe drops sometimes below the level of the heel, the general surgeon often commits the serious blunder of dividing the tendo Achillis, and so cuts his only ally adrift.

Mechanical treatment is woefully depressing, and the most serious attempt from the operative side has been made by Royal Whitman.

Recognizing that from the upright position of the heel the body weight is erroneously deflected, he makes a long external malleolus below its extremity, and terminating at the end of the astragalus. The peronei tendons are divided well forward and deflected; the joint is opened and the foot displaced inward. The astragalus is then innucleated. Sections of bone are removed from the outer surface of the os calcis and cuboid. On the inner side the sus-

tentaculum tali is removed and the calcaneonavicular ligament separated. The foot is then displaced backward as far as possible so that the external malleolus may cover the calcaneo-cuboid juncture, while the inner is forced into the depression behind the scaphoid. If the peronei are active they are fixed to re-enforce the Achilles tendon. The foot is then fixed in plaster in the attitude of equinus.

The operation, according to the writer, is both simple and effective in the following, but should not be performed in children below the age of eight:

(a) Calcaneo-cavus where the calf paralysis is complete. The operation is to be done in two stages, four weeks intervening.

Divide the plantar fascia if contracted and wrench with hand or instrument.

Make an incision down to the bone about three inches in length on the inner side of the foot, the center of the incision being opposite the angle of convexity.

With periosteum elevator separate the soft structures from the tarsus above and below from the inner to the outer side.

Remove a transtarsal V-shaped section of bone. If there be valgoid deformity let the section be wider on the inner than on the outer side. Suture, and obliterate the cavus deformity by extending the foot, which is now bandaged to the tibia, the calcanean deformity being apparently much increased.

Stage II (four weeks later): Make a longitudinal incision at back of heel, the center being opposite the ankle-joint. Open the joint and take a wedge from the astragalus, sufficiently large to be accurately obliterated when the foot is brought to right angles. Denude tibia and fibula of cartilage.

The foot should be brought to right angles and fixed immovably until union is complete.

(b) Calcaneo-cavus where some power remains in the calf muscle.

Stage I, as before.

Stage II: Shorten the capsule. Shorten the tendo Achillis; remove a skin flap, and after three weeks massage the gastrocnemius. In this case it is not advisable to remove bone.

In older subjects it may be necessary when removing a wedge to incise the outside as well as the inside of the foot.

For some weeks after walking has commenced the foot should be protected against strain.

Miscellaneous.

Dr. Geo. E. Pettey, of Memphis, Tenn., has closed his Denver and Atlantic City Retreats and has sold his interest in the Oakland Retreat to his former associate, Dr. C. L. Case, who will continue the work at Oakland in his own name.

Dr. Pettey's entire work will hereafter be done at his Memphis Retreat under his personal supervision. Improved facilities have been provided for handling alcohol and drug cases at the Memphis Retreat and hereafter every patent sent there will be under Dr. Pettey's personal care.

Dr. James S. Irvin, of Danville, Va., announces that after June 1st, 1909, he will confine his practice exclusively to Surgery, Gynecology and Consultations.

The Treatment of Puerperal Infection by Fixation Abscesses.

Boissard, (L'Obstetrique,) criticises, and in general supports, the arguments of Fabre, of Lyons, on the treatment of puerperal infection by means of injections of turpentine to produce an abscess. The pus produced in these abscesses is sterile, as shown by cultures, and Boissard has failed to find microbes in film preparations. The turpentine produces a local leucocytosis, a local "white-bloodsetting, and if this reaction does not follow the injection, the prognosis is bad. Boissard advises that this treatment should be adopted in all cases of puerperal infection which fail to yield rapidly to ordinary methods; at the same time ordinary methods should be kept up, and the author is careful to explain that, while urging the adoption of this treatment, he admits that he does not exclude the effect of disinfection of the uterus, and so on, from his general results. Of thirteen patients treated four died. In regard to technique, he recommends an injection at one point of from 3 to 5 cubic centimeters in a single dose, usually into the outer aspect of the front of the thigh or the anterior axillary line. The treatment is no general reaction; locally an abscess is usually formed in about six days, and as the pus is sterile it need not be opened till two or three days later. The cavity contains a large quantity of sloughy debris, which can be washed out with water or hydrogen peroxide.—Glasgow Medical Journal.

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In specifying Dr. Lydston as "specialist in the filthiest of human diseases," the Kentucky Medical Journal has been receiving some well-merited criticism from members of American Urological Association of Genito-Urinary Surgeons.—Lancet-Clinic.

A Prominent and wealthy citizen of Atlanta whose name is withheld has promised the Presbyterian Hospital of that city a gift of \$100,000 on condition that a like amount be raised by the hospital directors.

"A Case of Kala-azar in Vienna.

Much interest has been shown in a case of kala-azar now under treatment in the Vienna Clinic for children's diseases. It is the first case observed there. The patient, a Russian child, nine years of age, presented the following symptoms: Extreme emaciation, swelling of the abdomen, and increase of the size of the liver, spleen, and other glands. An exploratory puncture of the spleen was made at the clinic with the idea of searching for the micro-organism of kala-azar, and the diagnosis was confirmed by the cultures obtained. The interest of the case lies also in the fact that in Odessa, whence the child came, several cases have occurred quite recently according to the mother of the boy, whilst formerly kala-azar was unknown there."—London Lancet.

Hematogenous Origin of Pyonephrosis.

Fortunato Broccolo has studied experimentally in animals the production of pyonephrosis by ligation of one ureter and later injection into the blood of *Staphylococcus pyogenes aureus*. He gives us these conclusions: ligation of one ureter is always followed by hydronephrosis of the corresponding kidney, without any other cause. The dilatation of the pelvis is appreciable after six hours. As the transformation of the kidney into a sclerotic sac goes on the function is destroyed by destruction of the epithelial elements. Urinary stasis realizes all the necessary conditions for hematogenous origin of the infection. Pyonephrosis may be caused by the injection into the blood of pyogenic germs, provided they be in sufficient numbers, contain isolated forms, and the bacteria are of slight virulence. Infection occurs at the first injection. If the dose is exceeded suppuration will occur in the other kidney, the liver, and other organs. The opposite kidney never remains healthy, since the overwork required of it and the poisons to be absorbed always affect it also.—Lo Sperimentale

Seroimmunization and Serotherapy in Measles.

Francesco Cenci, in an epidemic of measles, obtained serum from a strong man who had recovered from the disease and injected this into four children who were exposed to the disease, while several brothers and sisters were left uninjected. All the children were left equally exposed to the contagion, and those who had been injected did not take the disease, while the others did. This showed that they had had conferred on them an immunity against the disease. This immunity lasted throughout the epidemic and for four months after it. In a

second epidemic, occurring four years later these four children had the disease lightly. Hence the immunity was only a temporary one. The author has also injected measles patients with anti-diphtheritic serum to test its effects. He found that the fever fell, the respiratory symptoms decreased, and the general condition improved rapidly. In one case of bronchopneumonia all the symptoms improved at once and the child was entirely well in a few days.—Rivista di Clinica Pediatrica.

Angina Pectoris and Its Treatment.

Marchiafava notes that angina pectoris is a more frequent malady than is generally supposed. In the light of his personal experience he treats of its etiology, symptomatology, course, pathogenesis, and treatment. The important part that the sclerosis of the coronary arteries plays in its causation is especially dwelt upon, above all the sclerosis of the descending branch of the left coronary artery. Aortic insufficiency frequently accompanies it. It is quite often of syphilitic origin. Rheumatism is another frequent element is arterial degeneration combined with relative ischemia of the myocardial area. In the treatment Marchiafava says that small doses of iodides are often of considerable value: he discusses at some length the advantages and disadvantages of nitrite of amyl and nitroglycerin. He has obtained excellent results from theobroma, of which he has made use for the past eight years.—La Riforma Medica.

Congenital Human Tuberculosis.

Maurice Pehu and Joseph Chalié, after a most careful study of the tuberculous cases denominated congenital that have been published, find only thirty-five that they consider undoubtedly congenital. Hence tuberculosis that is hereditary is exceedingly rare, and it is necessary to protect the infant against tuberculosis surrounding. In judging of these cases every possible method of investigation must be used. The condition of mother and father must be known, the genitals and placenta examined carefully, and the organs of the infant and the umbilical cord examined. The differential diagnosis involves syphilis, early acquired tuberculosis, pulmonary military abscess, and lobular bronchopneumonia. Maternal tuberculosis is easily ascertained. That of the placenta is frequent. Contagion in utero occurs only after the placental circulation has been established, and involves the liver and the viscera, rarely the lungs of the child. A child more than a month old has probably acquired the tuberculosis.—Archives de Médecine des Enfants.

Accuracy in Therapeutics.

The efficiency of a medicinal agent cannot be determined by mere physical appearance. Two specimens of fluid extract of digitalis, for example, may look precisely alike. One, upon administration, may exhibit a wholly satisfactory therapeutic action; the other, given under precisely the same conditions, may prove to be practically inert. Lack of uniformity in the crude drug, and absence on the other hand of an adequate method of assay, account for the singular discrepancy. And this serves to show the necessity of standardized remedial agents if we would proceed in the treatment of disease with any assurance of success. It emphasizes, too, the futility of trusting to chance that the extract of a crude drug contains what the practitioner supposes it to contain and what it ought to contain.

It is a healthy sign that manufacturers of medicines—some of them at least—are giving serious thought to this matter of standardization. It is cause for gratulation that the largest producers of medicinal products in the world consider the subject of sufficient importance to make it the basis of an expensive promotion campaign. We have in mind a series of announcements which have been published from time to time in practically the entire medical press of the country, the latest appearing under the significant title, "Who is the Keeper of Your Reputation?" In their plea for greater accuracy in therapeutics Messrs. Parke, Davis & Co. are doing vastly more than to exploit the products of their manufacture—they are rendering a lasting service to medicine.

It is to the physician's own interest, and to the interest of his patients, to prescribe standardized preparations; to provide himself with the most trustworthy agents that the market offers. The best is none too good for his purpose.

Because of their special properties, both Hydrozone and Glycozone are of singular utility in the treatment of all external wounds or affections characterized by suppuration.

In the treatment of open wounds and sores, the agents are used in the following manner to the best advantage:

First:—By means of a glass dropper or camel's hair brush, apply Hydrozone, taking care to avoid removing the white foam that is generated when the preparations comes in contact with the affected surface; it should be allowed to remain until disappears of its own accord, which will be a matter of only a few moments.

Secondly:—When the white foam has disappeared, apply Glycozone by means of a camel's hair brush or other suitable article, and complete the dressing with a double thickness of unmedicated surgical lint soaked with Glycozone. Cover the parts with oiled silk or gauze to prevent rapid drying.

It is advisable to apply Hydrozone and Glycozone undiluted until pus formation has been completely arrested; but if there be excessive tenderness of the parts affected, the Hydrozone may be diluted with water and the Glycozone with c. p. glycerine.

When suppuration has ceased, Hydrozone should be diluted with water, according to the nature of the affection, and the Glycozone diluted with glycerine, to the end that granulations will not form too rapidly. In every instance, the degree of the dilution of both Hydrozone and Glycozone should be varied according to the rapidity with which healthy granulations develop.

In the case of open boils, abscesses, ulcers or infected wounds, it is the part of wisdom to disinfect the parts with Hydrozone, undiluted, and apply Glycozone, after which a dressing of absorbent cotton impregnated with Glycozone should be applied.

Actinomycosis Treated by Potassium Iodide.—Galli-Valerio and Rochaz (Therapeutische Monatshefte) mentions the case of a hazle-nut sized tumor on the edge of the lower jaw that was incised and a greenish-yellow pus containing pinhead-size shining masses released. Examination showed typical actinomycosis granules. An ointment of potassium iodide was given and potassium iodide was given internally, beginning with 24 grains and increasing to 32 grains daily. The discharge ceased in eight days. Two weeks later the tumor was much smaller and after another week could no longer be seen, although a mass of large pea size could be felt. The mouth could be opened freely, the motion previously having been painful. Iodide rash developed, but the treatment was continued for six weeks, when catarrh of the nose forced its discontinuance for a week. It was then continued with one week's interruption for six weeks more. Six months later the patient reported again, and there was no sign of the disease except a small mass of scar tissue adherent to the bone and free from the overlying tissues.

The writer says that it has been proved that the disease in man is usually acquired from infected grasses and not from animals. The actinomyces fungus had been found on

stems and particularly on glumes of grasses, and in the actinomyces tumors of animals and man. Most of the cases reported in man have been in persons who were in the habit of chewing grass. The parasite occurs as a saprophyte on various grasses, especially on the heads, and Liebmam planting seeds with actinomyces spores was able to find the parasite growing on the plants developed from them.

The disease is always to be cured by large doses of potassium iodide if treatment is started early, and even in late cases is not hopeless. Operative treatment is not usually required, but does not interfere with the iodide treatment.

Treatment of Pernicious Anemia.—

Bramwell in the British Medical Journal says that during the past year he has met with two cases of advanced pernicious anemia in which, after a certain degree of improvement had taken place under arsenic, arrest of the improvement occurred, and in which the administration of iron was then attended with very marked and rapid alteration for the better.

It has long been recognized that in typical cases of pernicious anemia, in which the color index is above the normal and each individual red blood-corpuscle contains more than the normal amount of hemoglobin, the administration of iron is usually unattended with benefit, and is in many cases apparently injurious. This has been the author's experience; but he has met with some exceptions, amongst which the two cases he has just reported are perhaps the most striking.

When to Operate for Enlarged Prostate.—

Freyer, in The Dublin Medical Journal, reviews six hundred cases in which he performed total enucleation of the prostate for enlargement of that organ, the patients varying in age from forty-eight to eighty-nine years, with an average of sixty-eight and one-half years. There were forty-seven octogenarians between the ages of eighty and eighty-nine, and seven patients aged seventy-nine years. The prostates ranged from $\frac{1}{2}$ to $16\frac{3}{4}$ ounces, with an average weight of about $2\frac{1}{2}$ ounces. The great majority of the patients had been entirely dependent on the catheter for periods varying up to twenty-four years. Nearly all were in broken health and many apparently dying before operation. Existence was simply intolerable to most of them. Few were free from one or more grave complications, such as cystitis, stone in the bladder, pyelitis, kidney disease, diabetes, heart disease, chronic bronchitis, paralysis, hernia, and in a few instances there was malig-

nant diseases of some other than the prostate. Such were the unfavorable circumstances under which the operation was undertaken. In connection with these 600 operations there were thirty-seven deaths, in periods ranging from six hours to thirty-seven days after the operation, or a mortality of 6.15 per cent. The mortality has been steadily decreasing from ten per cent. in the first 100 cases to four per cent. in the last. The causes of death were: Uræmic symptoms due to chronic kidney disease, 16; heart failure, 6; septichæmia, 2; shock, 3; exhaustion (kidneys much diseased), 1; mania (hereditary in 1), 2; malignant disease of liver, 2; heart stroke, 1; pneumonia, 1; acute bronchitis, 1; pulmonary embolism, 1; and cerebral hæmorrhage with paralysis, 1. Though all these deaths are accepted in connection with the operation, in not more than half the number can the fatal result be attributed thereto, the remaining deaths being due to disease incident to old age and unconnected with the operation. In 108 cases vesical calculi were removed at the same time; but all the deaths in these patients are accepted in connection with the prostatectomy, none being put down to the suprapubic lithotomy involved.

An Aid to the Diagnosis of Atonic Dilatation of the Stomach.—Carnot's (Presse med.) method for the detection of gastric atony depends upon the fact that in this condition the pylorus is patent. The patient's stomach is emptied by means of the stomach tube and 500 c.c. of water introduced. The patient remains in the erect posture for an hour, after which the water remaining in the stomach is again withdrawn as completely as possible and measured. Thereupon (or at the next visit) 500 c.c. of water are again introduced and the patient is made to lie on his right side for an hour. In this position the force of gravity enables the dilated and weakened stomach to empty itself through the patent pylorus, and at the expiration of the hour the stomach will be found empty or nearly so. If this is the case, then the greater the amount of water found in the first examination, the greater the degree of gastric atony.

The Effect of the Various Drugs Upon the Coronary Circulation.—Eppinger and Hess (Ztschr. f. exp. Path. u. Therap.) have made examinations of the hearts of various animals, dilute solutions of various drugs were made to pass through the coronary circulation, and the effect noted. It was found that adrenalin dilated the coronary vessels while contracting those of the peripheral circulation; cholin, physostigmin

and pilocarpin contracted the coronaries and dilated the peripheral vessels; barium chloride, digitoxin and strophanthin contracted both; atropin and sodium nitrate dilated both; sodium iodide was without effect. These interesting observations seem to indicate that the rational medication in true angina pectoris consists in the administration of adrealin, atropin and sodium nitrite, the first where the general blood-pressure is low, the two last where it is high.

Chauffeur's Fracture.—Beatson (Glasgow Medical Journal) says that a fracture at the lower end of the radius, which occurs in starting a motor car, was first described by Lucas Championniere in 1904. The symptoms are not distinctive, resembling those of a severe sprain of the wrist. Swelling of the joint and pain on movement were present in two cases seen by the writer, and in one crepitus was distinct. Chauffeur's fracture shows that there may be a Colles' fracture without the typical deformity. This fact is not sufficiently recognized, and sprain of the wrist is diagnosed because there is no deformity.

Treatment of Basedow's Disease with Antithyroidin.—W. Baumann very strongly opposes the view, recently voiced, that many of the good results obtained with antithyroidin are a result of suggestion on part of both patient and physician. One of the author's cases of Basedow's disease was complicated by metabolic disturbance, and the appearance of traces of albumin in the urine. Antithyroidin was given for only three weeks; at first 8 drops three times a day, then 10 drops. All in all, 30 Cc. were employed. The result was quite surprising. After four to five days there was pronounced improvement and at the end of the treatment the patient felt restored to perfect health. The thyroid tumor had diminished 1 Cm., the pulse was only 70 per minute, and the other objective signs had disappear-

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Intravenous Arsenic Tuberculin Treatment.—Mendel (Munchener Med. Wchschrft) recommends intravenous injections of a 15% solution of atosyl (0.05, 0.3 at a time) in combination with tuberculin (1:1000 or 1:10,000) especially for use in lung-sanatoria, in advanced cases, in which the ordinary physical methods of treatment prove inadequate. The most desirable arsenic preparation, in his opinion, is atosyl, which never gives rise to toxic symptoms when used in the above-mentioned strength and medium doses, but precisely in the form of intravenous injections displays an eminently curative effect, without any untoward side manifestations. In the majority of the cases, this method of treatment led to an improvement of the general condition not only, but to a modification of the local pathological process, showing that the power of resistance of the organism against the tuberculous infection is very efficiently increased through this combined method of treatment.

We clear our mind of two fallacies: "A cold is not a chill, and is not always the result of contagion from without. A chill is a definite but very evanescent disturbance of physiological function which may offer the opportunity for the development of a cold, but it is just as likely to start a pneumonia or initiate a nephritis. It has been well said that if you get pneumonia as a result of being drenched in a downpour, you would not find the pneumococcus in your wet clothes. The pneumococci were already in the system, but powerless to do harm, or impotent to injure until the advent of the chill placed the system for the moment *hors de combat*, and gave the micro-organisms the chance to ravage and destroy. It is now a mere truism that specific may live in the tissues as peaceful law-abiding residents, but may suddenly become virulent agents for danger. We do not clearly understand the conditions under which this metamorphosis happens, but we are pretty confident that in many cases a chill is responsible for the baneful change.—*Folia Therapeutica*.

Contribution to the Knowledge of the Hypophysis Cerebri.

A Gemelli has studied the function of the hypophysis cerebri by ablation of the organ in animals. His conclusions are these: the organ is not indispensable to the life of the animal because animals survive indefinitely the removal of the organ. In all probability other organs of similar structure and functions take the place of the removed organ. In young animals from whom it has been removed there are more effects noticed than in adult animals; there is an arrest of development, shown by lessened weight, length of the limbs, etc. The glandular lobe of the hypophysis has a marked antitoxic action. The other lobe is an ancillary organ of the kidney.—*La Riforma Medica*.

The Use of Soap in Surgical Therapeutics.

L. Delrez describes the use of soap plasters and soap injections in the treatment of surgical tuberculosis. It is applied in form of a thick plaster underneath the immobilizing apparatus. No bad symptoms have ever been observed from this treatment. On the contrary the general condition improves rapidly. In case of tuberculosis of the soft parts or of bone fistulae the same treatment may be used, after careful curettage of the fistula and hemostasis. The author has injected soap tinctures into softened inflammatory cavities without any bad effects. It causes pain and acts as a cauterant for a few moments, when all pain disappears. After from eight days to two weeks a new injection is made. Its action is not due to a marked bactericidal action, which it does not possess. At the same time it causes healthy repair of tissues. It does not prevent the union of a wound by first intention, but, on the contrary, facilitates it. After opening a tuberculous focus, curetting it, and removing the pyogenic membrane, it may be filled with soap solution, and we may suture the edges of the wound. Its action is to cauterize the entire surface that is tubercular, and destroy necrosis, and giant cells, but does not produce an acute inflammation. It acts directly on the tubercular tissue, destroys the pyogenic membrane, and increases the vital activity of the tissues.—*Archives Provinciales de Chirurgie*.



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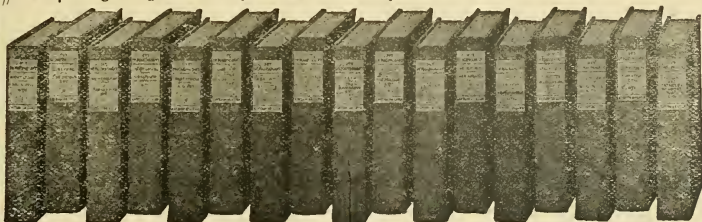
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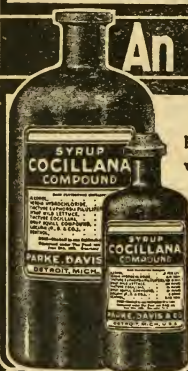
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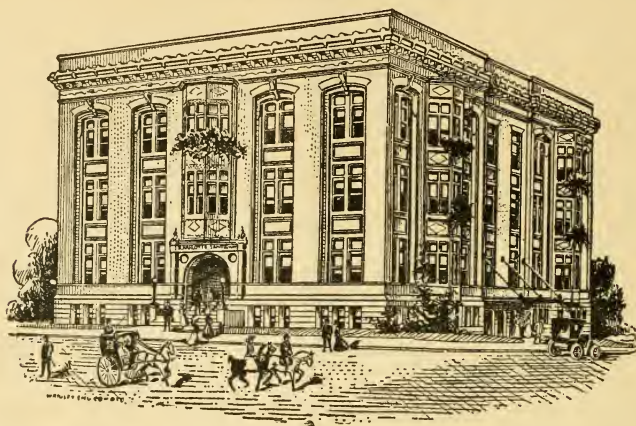
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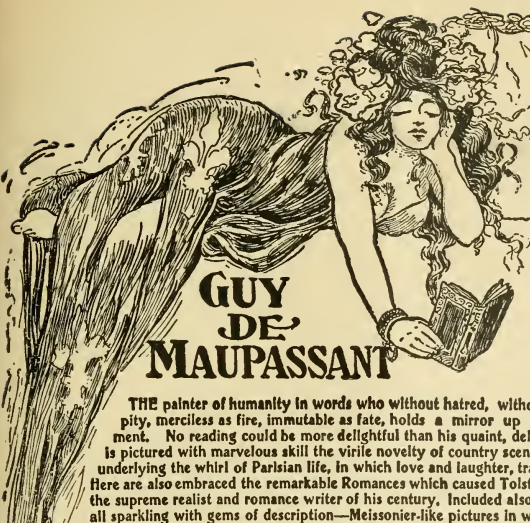
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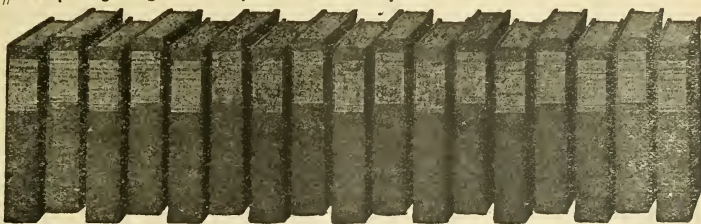
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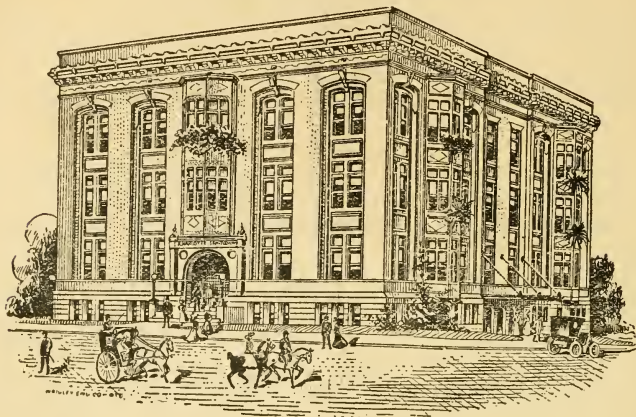
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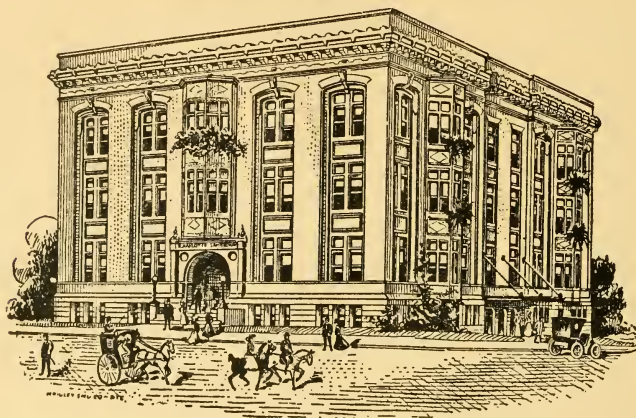
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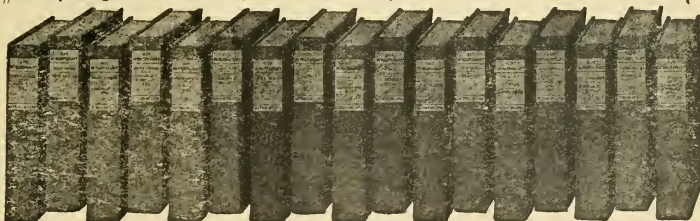
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A SOUTHERN JOURNAL OF MEDICINE AND SURGERY.

VOLUME 59.
NUMBER 5.

Charlotte, N. C., May, 1909.

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The particles of curd are so small that the infant can take its food in the usual way from a nursing bottle

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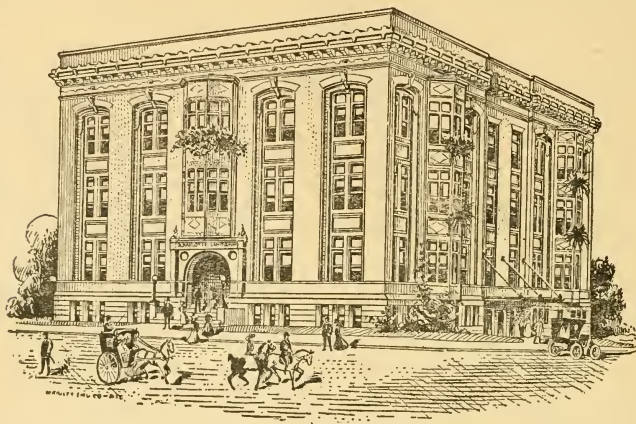
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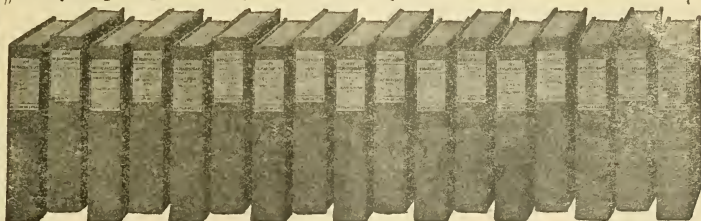
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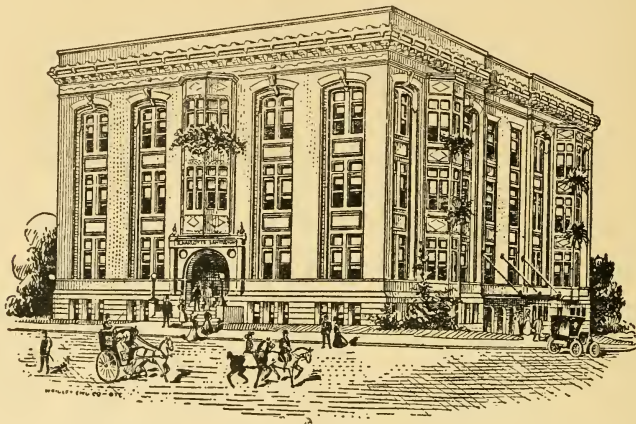
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